Lectures

ON THE

RECENT ADVANCES OF OUR KNOWLEDGE IN THE DIAGNOSIS AND TREATMENT OF FUNCTIONAL NERVOUS AFFECTIONS.

By C. E. BROWN-SÉQUARD, M.D., F.R.S., &c.

LECTURE I.

GENERAL REMARKS ON THE CAUSES, DIAGNOSIS, AND TREATMENT OF FUNCTIONAL NERVOUS AFFECTIONS.

(*Continued from page 2.*)

I WILL say only a few more words on the causes of functional nervous affections. The important discussions between Virchow, Spiess, and others on the share of the nervous system in the causation of the various morbid alterations of tissues and organs, have been very useful in bringing forward many interesting facts; but the exclusiveness of the two opposite schools, at the head of which are the eminent men I have just named, has thrown a great deal of obscurity on questions which, considered with less partiality, might have been solved easily. It is certainly true, as maintained by Virchow,* that nutrition and secretion, normal and abnormal, can be carried on without the intervention of the nervous system; but this does not at all prove that the nervous system cannot interfere, for good or for evil, in the nutrition and secretion in the various tissues and organs. For instance, there is no doubt whatever that an inflammation, followed or not by suppuration and ulceration, can take place without any intervention of the nervous system; but, as will be proved in one of the ensuing lectures, there is no doubt also that inflammations not only can be, but very frequently are, produced by a nervous agency. Indeed, facts are extremely numerous that establish clearly—1st, that normal nutrition and secretion do not depend essentially on any interference by the nervous system, and that all morbid changes in these fundamental organic functions can take place without any nervous influence; 2nd, that the nervous system may, and almost constantly does, influence nutrition and secretion, and that it frequently produces, or helps to produce, a great variety of alterations of these two fundamental functions.

Not only can an excitation of the same nerve produce effects in the different parts of the nervous centres, in one or other of the viscera, or in distant nerves or muscles or bones, &c., but it can also produce, in the same part of the nervous centres, in the same viscus, in the same muscle, &c., different kinds of alteration. Why is there such a variety of alterations produced in one and the same part by an excitation which varies only in intensity? To answer this question I must go beyond the limits of the subject-matter of this course of lectures, and cast a glance on the mode of production of morbid affections of the various tissues and organs. Physiology, morbid anatomy, and clinical observation clearly point out that all nervous affections (organic and functional), as well as affections of any other part of the body, owe their production to three different causes.

1st. A special inherent tendency (inherited or not) of the elementary parts of the tissues to become altered in one or in another way.

2nd. The production, or introduction in the blood of those materials that are necessary for the formation of morbid growths, or able, like poisons, to cause alterations of nutrition or secretion.

3rd. An influence of an excitation from outside, acting with or without the intervention of the nervous system, or a purely nervous influence starting from a peripheric or a central part of the nervous system.

If we keep in mind the truth that these three causes may exist together and in various degrees, we can easily understand how the same excitation of the same nerve may produce in the same distant part different kinds of alteration of nutrition. It is so that an irritation from a wounded nerve will produce either tetanus, or chorea, or catalepsy, or epilepsy, or delirium, &c., and, by a reflex action on a peripheric part, muscular wasting or trembling, a contracture, a neuralgia, &c.

I now pass to the diagnosis of functional nervous affections, on which subject I will only point out in parallel columns the principal distinctive features of these affections compared with organic nervous diseases.

Characters of functional nervous affections.	*Characters of organic nervous diseases.*
1st. The principal causes are: an alteration of the blood, and an irritation of a part of an incident or centripetal nerve, by a neuralgia, by worms, by teething or decayed teeth, by a wound, a burn, &c.	1st. One of the principal causes is a special tendency (inherited or not) to inflammation, to alterations of the bloodvessels, or to the formation of morbid growths.
2nd. Great variability in the intensity of the symptoms, and regular or irregular recurrence of attacks, with intervals of almost perfect health between these attacks.	2nd. Persistence of the principal symptoms, with slow variations in their intensity.
3rd. A sudden or rapid cure or improvement is not rare.	3rd. A sudden or almost sudden cure is impossible, and a rapid improvement is exceedingly rare.
4th. Certain symptoms—such as a sensation of pricking, of formication, of burning heat, of icy cold, and other symptoms of irritation of conductors of sensitive impressions, and also alterations of nutrition and secretion of the skin and of mucous membranes and glands (bladder, kidneys, &c.)—are extremely rare, except in a few of these affections (neuralgia, affections due to alterations of the blood, &c.)	4th. Most of the symptoms due to the irritation of conductors of sensitive impressions and of nutritive and secretory conductors, are extremely frequent in inflammation and even congestion of the nervous centres or their meninges, and they are not rare in many other organic nervous diseases.
5th. The temperature of affected parts generally low.	5th. The temperature of affected parts generally high.
6th. The sphincters of the bladder and rectum usually normal.	6th. The sphincters of the bladder and rectum often attacked with spasm or paralysis.
7th. An aura, felt or unfelt, very frequently exists in some forms or periods of epilepsy, of hysteria, of catalepsy, of hydrophobia, &c.	7th. An aura, felt or unfelt, exists only when the organic disease has caused a functional nervous affection.
8th. To remove the cause is an essential part of the treatment.	8th. To remove the cause is often impossible, and, when possible, of less importance than the direct treatment of the structural alterations.

Other means of diagnosis between organic and functional nervous affections have been found within the last few years. As I shall have to speak of them at some length when I treat particularly of certain functional disorders, I will merely say here that the most interesting amongst them are—1st. The effects of pressure on nerves, as employed by Dr. A. C. Pinel, Dr. Aug. Waller, and Messrs. Bastien and Vulpian. 2nd. The effects of tickling, and the degree and extent of reflex movements. 3rd. The influence of galvanic applications. 4th. The effects of strychnine as a test for congestion in the spinal cord and its meninges. 5th. The existence of anæsthesia limited to a small spot. 6th. The alteration in the speed of transmission of sensitive impressions. 7th. The existence of an unfelt aura.

Treatment of functional nervous affections.—Great advances in the treatment of neuroses have been made within the last ten or fifteen years, particularly as regards a more rational or better appropriated employment of remedies and other modes of treatment than by the discovery of new remedies. I may say that I will speak of the rejection of certain modes of treatment, or of their limitation to fewer cases, as a real advance in therapeutics. I will divide this subject into eleven parts, as follows:

* See Dr. Chance's excellent translation of Virchow's "Cellular Pathology," Lect. XIV. London, 1860.

I. Means of suppressing the causes or of diminishing their intensity.

II. Means of diminishing the reflex excitability of the nervous centres.

III. Moral treatment.

IV. Special modes of treatment in periodical affections.

V. Treatment through irritations of the sensitive and other incident nerves.

VI. Physical and mechanical means of treatment.

VII. Complex modes of treatment, combining the two processes of irritation of incident nerves and a modification of the blood.

VIII. Change of the composition of the blood and elimination of morbid and other poisons.

IX. Special use of anæsthetics.

X. Treatment by remedies acting directly on the nervous system or on the unstriped muscular fibres.

XI. Treatment by tonics and other remedies.

I. *Means of suppressing the causes, or of diminishing their intensity.*—When functional nervous affections are due to an evident irritation of a branch, or of the terminal ramifications of a nerve of a limb, or a superficial nerve of the abdomen or chest, several means of treatment may be successfully employed to check or to cut off the irritation. I will say a few words on the most important of these means.

1st. *Local applications of narcotics.*—In cases of epilepsy, of tetanus, of hysteria, and most other functional affections of the nervous system, a wound of the skin or of a branch of a nerve may be the cause of the nervous disorder. Narcotics, and particularly soluble salts of morphia and atropia, employed together, should be applied on the wound itself, in doses varied according to the absence or the abundance of suppuration. An important rule of this mode of treatment, about which I will say much more in the lecture on tetanus, is that the application of narcotics must be frequently renewed, particularly if there is an abundant discharge of pus. If the cause of a functional nervous affection is a division of a large branch or of the trunk of a nerve, an injection of a solution of morphia and atropia should be made at some distance from the wound in the subcutaneous cellular tissue, round the central part of the divided nerve (half a grain of a salt of morphia with one-fiftieth of a grain of a salt of atropia).

2nd. *Local application of ice.*—I have long ago pointed out the usefulness of this application on a wound producing a functional nervous affection. I will only say here, that when such a means is employed, particularly in a case of tetanus, there should be no interruption in the presence of ice on the wound during the whole of the time that the nervous affection lasts. Billroth has recorded two cases in which tetanus due to a wound has appeared, notwithstanding the application of ice on the wound. It is probable that in these cases there had been some interruption in the application of ice.

3rd. *Application of the actual cautery.*—This means, which may be useful when it is necessary to alter the nature of the secretions in a wound, or to destroy parts of tissues containing a venom, has not generally so much value as the preceding and the following modes of treatment.

4th. *Various applications on the trunk of nerves at some distance from a wound.*—It may be useful to lay bare the nerve that gives filaments to the wounded part, and to apply sulphuric ether or narcotic alkaloids or ice upon it. In cases in which there is reason to expect that the original wound will soon heal, this mode of treatment might prove useful.

5th. *Section of a nerve.*—The number of cases of epilepsy, of tetanus, and of other nervous complaints, due to a wound, a burn, &c., in which this mode of treatment has proved quite successful is now so large that there is no doubt as regards its immense value. It is most important to know that the operation must be performed early, and that its chances of success decrease rapidly with the prolongation of the nervous affection produced by a wound, a burn, or some other peripheric cause of irritation. It is necessary not only to divide the nerve completely, but to take away a small part of its peripheric end, which is to be examined carefully with the microscope to ascertain whether it is altered or not. If it is found inflamed or otherwise altered the operation must be repeated (if possible, of course) on the same nerve much nearer the spine or the cranium. The examination of a small part of the nerve extirpated in this second operation will prove important for the prognosis of the case. It can hardly be an objection against the division of a nerve in affections like epilepsy, tetanus, hydrophobia, &c., that a paralysis is the necessary result of the operation. No sane man can hesitate between these two things: an almost certain death, or the persistence of a most horrible affection which may produce imbecility; and a paralysis of motion and sensation in a part of a limb, or even in a whole limb. And the hesitation, if any could exist, would certainly give way to the knowledge that the ends of a divided nerve, even when a small part has been excised, will often unite soon, or at least within a year, and the paralysis be cured more or less completely. The rapidity of reunion of the ends of a divided nerve may be so great that in a few weeks, and even sooner, there may be a partial return of function, as shown by cases reported by Mr. J. Paget, by Mr. Syme, and by Prof. Laugier. As regards the completeness of the return of the vital properties in a divided nerve, I have seen that it may be as perfect as possible, particularly in the case of a nobleman on whom Sir William Fergusson had divided the infra-orbitalis for a neuralgia.

6th. *Operations on the genital organs.*—An able surgeon has lately treated several kinds of functional nervous affections by the extirpation of the clitoris. That this operation may sometimes be useful there is no doubt at all. But I cannot look upon this mode of treatment as one that should be employed in other cases than those in which a distinct aura starts from the clitoris, or in those cases in which that organ is morbidly sensitive and much hypertrophied. There are cases of nervous complaints, due to masturbation, in which the clitoris has been extirpated without any durable benefit as regards the nervous affection, or even as regards the masturbation. In women, as well as in men, the only decisive means against masturbation is the production of a small ulcer (by caustics or the red iron) on parts of the genital organs that are unavoidably touched or moved in the act of self-abuse, so that every attempt to accomplish the act, either with or without the help of the hand, is so painful that the patient must give it up. As regards the removal of the testicles, it seems to me a barbarous operation if performed only because there is an excessive tendency to sexual intercourse. I will say more on this point when I treat of epilepsy.

7th. *Trephining of the cranium.*—As a mode of treatment against epilepsy this operation has been much more frequently performed than is generally known. It has also been performed, and successfully, in a case of tetanus, which I will mention in another lecture. It would be out of place here to discuss the question of the usefulness of that dangerous operation as a means of treatment of epilepsy. I will merely say that it is only in cases of an irritation of the dura mater, by a broken piece of bone, by diseased bone, or any other evident organic cause, that trephining can rationally be performed; and that even in such cases a cure might be obtained (and has really been sometimes obtained) by the use of counter-irritants on the diseased spot. In another lecture I will give the details of a most interesting case published by Mr. Henry Lee (in Dr. Beale's *Archives of Medicine*, 1860, p. 80), in which trephining of the cranium cured an ulcerous affection of the skin of the arm and spasmodic movements in the same limb.

8th. *Ligature of the carotid artery.*—This most irrational mode of treatment is, or, I hope, will be, completely abandoned. It has been employed in epilepsy and in mania with the view that those affections depend on a congestion of the brain, and that a ligature round the carotid artery would diminish that congestion. I will show in the lectures on Epilepsy that the good effects of this operation in the cases of Preston and his imitators have been obtained chiefly through some injury to the cervical sympathetic nerve.

9th. *Other operations for the removal of causes of functional nervous affections.*—I will only point out the importance of the removal of a decayed tooth, of a tumour, of a carious or necrosed bone in those cases in which there is a probability that these sources of irritation are the principal causes of a nervous complaint. Of other operations, such as tracheotomy and the cauterization of the urethra, I will only say a few words. It is now perfectly established that the theory of epilepsy given by Marshall Hall was wrong; and that if tracheotomy may be useful in some cases of epileptic coma, of spasm of the glottis, in tetanus, in hydrophobia, or in whooping-cough, &c., this operation is then of service against an effect, and not against a cause, of the existing nervous affection. As regards the cauterization of the urethra, according to Lallemand's plan, in cases of nervous complaints due to seminal losses, I must say that I have been consulted by a great many patients who had been vainly submitted to that operation; while I have often observed a considerable amelioration, and sometimes a cure, by a medicinal and hygienic treatment, consisting in the use of atropine, the ergot of rye, large doses of the bromide of potassium, and tonics—such as quinine, iron, man-

ganese, silver, with cold, shower, and sitz baths, gymnastic exercise, and the most nourishing alimentation.

10th. *Treatment against alterations of the blood and visceral diseases.*—I only wish to point out under this head that every organ or part of an organ, in so far as it has nerves, and also if it has any marked influence on the composition of the blood, can be the cause of a functional nervous affection. Therefore any alteration of any organ must be fought against in any such nervous affections, particularly when no other cause of it can be found but that alteration. As regards the morbid states of the blood, there is no general rule of treatment that can be given. Anæmia, chlorosis, rheumatism, gout, and syphilis are to be treated in the same way when they are the causes of a nervous complaint as when they have produced no such effect.

II. *Means of diminishing the reflex excitability of the nervous centres.*—An increase of the reflex excitability of some part of the nervous centres is one of the most important elements of many neuroses, and particularly epilepsy, hysteria, tetanus, hydrophobia, delirium tremens, chorea, paralysis agitans, and some forms of reflex insanity. To diminish that increase of reflex excitability is an essential part of the treatment in those affections. The following remedial agents are to be employed against this morbid excitability:—1st. Codeine, morphine, atropine, valerian, aconite, the chloride of barium, and the bromide of potassium, are undoubtedly the most reliable remedies against an increased reflex excitability. According to the kind of nervous affection and also to the seat of the increase of that vital property, we are to select one or several of these remedies. Atropine, valerian, and the bromide of potassium, are the most valuable in epilepsy; the chloride of barium is of real value against tetanus and paralysis agitans, but of no use in the common forms of epilepsy; codeine, morphine, and valerian are useful against hysteria &c. None of these remedies, however, equals chloroform, but unfortunately its influence is merely transitory. Counter-irritants and the warm bath have also a great power against the increased reflex excitability, as I will show in another part of this lecture. 2nd. As a morbidly increased excitability is very often due to anæmia or to an impoverished nutrition, all the hygienic and medical means (good food, exercise, and tonics) that can improve nutrition should be ordered in such cases against that morbid state. 3rd. It is of the utmost importance to improve the sleep, which is generally so bad in patients attacked with a morbid increase of the reflex excitability. For this purpose an invaluable remedy has recently been discovered: it is the bromide of potassium. Excepting when pain is one of the causes preventing sleep (in which case opium, aconite, and belladonna should be employed together), I have found that this remedy has a most wonderful power to produce a quiet and refreshing sleep, without any drawback that I am aware of.* I usually give to adults a dose of thirty grains of that salt a quarter of an hour before the last meal, and a second dose of from thirty to fifty grains at bedtime. In cases in which, without any nervous complaint, there is sleeplessness owing to some cause of cerebral excitement, as well as in all neuroses, excepting hydrophobia, tetanus, very severe cases of delirium tremens, and some forms of insanity, sleep is almost always induced by that remedy. In some cases I have found it necessary to increase the dose of the bromide, and to give also one grain or one grain and a half of codeine an hour before bedtime. In those affections in which the bromide of potassium is not powerful enough as a sleep-inducing agent, a warm bath of four, five, or six hours' duration is often successful.

III. *Moral treatment.*—As I shall have to dwell at length on this subject when I treat of hysteria, I will only say a few words here on two general principles, which, notwithstanding their importance, are very much neglected. The first of these principles, so well established by the researches of Dr. Cerise, is that a *serious aim* is of the greatest value, and for many persons quite essential, to prevent or to check nervous disturbances. The applications of this principle are, of course, very difficult and often impossible in certain neuroses; but in those cases in which any kind of serious work, not too fatiguing or exciting, is liked by the patient, he should be induced to do it. In cases of hypochondria, of hysteria, of chorea, and even of epilepsy, a great benefit can be derived from a serious employment of the mental and physical activity of the sufferer. How often have I not seen young epileptics kept in idleness (alas! by medical advice), and, having gained more or less of the vices it leads to, improve rapidly from having their minds occupied at regular hours, in the same way as healthy people of their age. The second principle of which I will speak now is that we must, in the interest of our nervous patients much more than in our own, give them confidence and hope in the treatment we recommend. In hysterical and all nervous complaints allied with it, and also in hypochondria, and in several other neuroses, a great hope of cure will do much to work out the cure. No doubt you will say, How to give hope? I answer that the best means for that purpose is to have hope ourselves, and to express our hope with the accent of conviction. And as you would ask, How can we command hope in ourselves? I answer that the very knowledge of the truth of the principle I am now speaking of is enough to render one hopeful. I need not repeat that I am now speaking only of those neuroses in which the power of the mind upon the body is immense, and so much so that in some forms of these neuroses a sudden or almost sudden cure is not very rare.

IV. *Special modes of treatment in periodical nervous affections.*—It is not my intention to speak now of the well-known useful influence of sulphate of quinine against perfectly periodical attacks of neuralgia, of epilepsy, &c.; I only wish to speak of a method of perturbation of the nervous system which I have employed with great advantage in some of those cases of local convulsions, of attacks of epilepsy, of hysteria, &c., which either recur nearly at fixed periods or are preceded by a warning that gives time to make use of the means I will now mention. In a case of spasm of some muscles of the jaw and face, preceded by a sensation of pricking in the cheek, and occurring several times a day, in a boy seven years old, I found that violent exercise on a swing always prevented the fit when the patient had time to run to the swing before the muscular contraction had begun. By that means, which never failed, the boy was many hundred times saved from his attack before being completely cured of it, which occurred on the coming out of a molar tooth, which, however, had not given the least pain. The beneficial influence of this mode of perturbation of the nervous system I have observed since in a number of cases of hysteria and epilepsy. A great many other means of changing the state of the nervous system have been employed with some benefit by other physicians or by myself. Among these means I will merely mention here the following:—A ligature round one or several limbs (even when there is no evident aura) tied strongly and suddenly; a pretty sharp pinching of the skin; a rather large dose of an emetic taken with a great quantity of water; a cold shower-bath on the back; the application of an interrupted and powerful electro-magnetic current; a dose of twelve, fifteen, or eighteen grains of sulphate of quinine about an hour before the expected attack; an enema of a drastic medicine; the inhalation of chloroform, &c. I will give more details on these important perturbing means in the lectures on hysteria, neuralgia, and epilepsy.

(To be concluded.)

* See Dr. H. Behrend's paper on this subject in THE LANCET, vol. I. 1864, p. 607.

EXCISION OF THE TONGUE.

BY JAMES SYME, F.R.S.E.,

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ABOUT twelve months ago I communicated a case in which the tongue had been completely removed by excision, on account of extensive disease that threatened to prove fatal by preventing the admission of nourishment. This account was necessarily limited to the operation and its immediate effects, as sufficient time had not elapsed for determining whether or no the relief afforded would prove permanent, or how far the powers of deglutition, articulation, and taste would be restored. After his return home to Manchester, the patient sent me favourable reports of his progress, but certainly not such as to convey any adequate idea of the improvement that had taken place since he came under my care. He was then emaciated and bent down by long-continued suffering, unable to articulate, so as to require a slate and pencil for expressing his wishes, and swallowing even fluids with such extreme difficulty as to feel on the point of starvation. My surprise may, therefore, be imagined when on the 10th of September last he unexpectedly made his appearance, erect and vigorous, and, seeing that I did not recognise him, announcing his name in a loud, clear voice. The feeling thus excited was not lessened

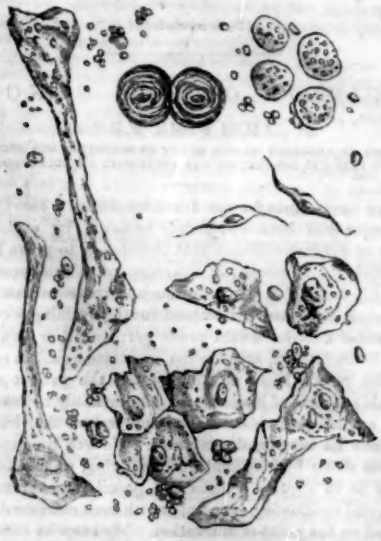
by learning that while travelling in the Highlands he had dined at table d'hôtes, and entered into conversation without betraying the deficiency under which he laboured. Very much astonished by a result so much better than could have been anticipated, I requested a number of my medical friends to join me in examining the state of matters. Professor Goodsir and Mr. Nasmyth having satisfied themselves that no vestige of the tongue remained, various observations were made with regard to articulation and other functions of the absent organ; and Mr. Annandale afterwards instituted a more particular inquiry, of which he has given me the following report:—

"The lips and jaw-bone, where divided, were soundly united without any deformity. The opening between the mouth and pharynx was much diminished in size and irregular in shape from contraction of the fauces and soft palate, which were drawn downwards and forwards more to the right than the left side, from the mucous membrane at that part having participated in the disease and been removed along with the tongue. Mr. W—— says that he can swallow as well as ever, provided that the food is either finely divided or fluid. He is also able to masticate solid substances, although difficulty is sometimes experienced from their getting into awkward parts of the mouth. In ordinary speech his words are wonderfully clear and distinct, and he can sing without any difficulty. All the vowels and words composed of them are articulated perfectly, and also the following consonants:—B, C, F, H, K, L, M, N, P, Q, R, V. W. D is pronounced 'dthe,' J 'the,' G like 'sjee,' 'S' is a lisp. His taste is impaired, but still enables him to distinguish different articles and their respective qualities, as grouse from partridge, bitters from sweets, good beer from bad beer, &c. He has remarked that the seat of sensation lies somewhere in the throat, since there is no recognition of taste previous to the act of swallowing; and, in order to ascertain the truth on this point more precisely, the following experiments were made:—

"1. A strong solution of salt was applied by means of a camel-hair brush to the fauces, palate, floor of the mouth, lips, and inner surface of the cheek, with the result of something being felt in the mouth, but no idea formed as to its nature.

"2. About a quarter of a teaspoonful of finely-powdered sugar was placed on the floor of the mouth, and, having been allowed to remain there a few seconds, was then brought thoroughly into contact with every part of the cavity without any recognition of its nature; but when a little water was added and swallowed, the taste was immediately perceived.

"3. The same experiment was repeated with another substance (salt), and with the same result."



It has long been known that large portions of the tongue may be removed without destroying or materially impairing the power of articulation, but I am not aware of any case on record in which it has remained so perfect after complete removal of the organ. Of the facts above mentioned, the one that seems most curious is the connexion between taste and deglutition; from which it appears that the latter is essential for the full perception of the former. If the pleasure of taste could be perfectly gratified by mastication without deglutition, there would be no limit to the consumption of food; but the instinctive desire to swallow an agreeable morsel affords a check to any such abuse.

As the nature of the disease was not particularly described in relating the operation, a representation of the microscopic structure exhibited by the tumour (for which I am indebted to Mr. Annandale) may be given, to show that it possessed the characters of epithelial cancer.

Rutland-street, Edinburgh, Jan. 1866.

REMARKS
ON
SPURIOUS ENTOZOA FOUND IN DISEASED AND HEALTHY CATTLE.

BY T. SPENCER COBBOLD, M.D., F.R.S.,
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AT a time when the public mind is thoroughly aroused to a sense of the dangers consequent upon eating pork infested with trichinæ, it is of the utmost importance that those who undertake to instruct the people should state no more than their ascertained facts will allow. To the uninformed, one parasite seems as baneful as another; or, to say the least, people are constantly liable to mistake the harmless for the hurtful species. In proof of this I may mention that only a few days ago I received a portion of fine, healthy beef from a highly respectable butcher, who requested me to examine it.* A customer had just previously returned the meat, saying that it was diseased and unfit for human food. On examining the beef microscopically, I found a very large number of psorospermiæ embedded in the muscular fibres; but in all other respects the meat was perfectly free from impurities, real or imaginary. In this case, therefore, it is possible that the customer caused the meat to be examined microscopically, and, having seen Dr. Fenwick's letter in *The Times*, naturally concluded that the meat was loaded with dangerous entozoa. As might be expected, the tradesman was not a little astonished at receiving back his meat, which he had every right to believe was as good as any other obtainable in the market.

To the supposed connexion between these so-called entozoa and the cattle plague I shall presently make special reference; but, meanwhile, let us glance at the labours of others in reference to these parasites. The bodies in question are by no means new to science. Similar or analogous organisms are to be met with in a great variety of animals, and likewise in the human body. They have been described under a variety of titles, such as worm-nodules, worm-nests, egg-sacs, eggs of the common fluke, young measles, corpuscles produced by muscular degeneration, psorospermiæ, stages of growth of gregarinæ, amœboid bodies, and so forth. In so far as the higher animals are concerned, Dujardin was the first to describe these structures in the mole (*a*). This animal, however, having been fed upon earthworms (whose perivisceral cavities were previously known to be constantly liable to harbour such parasites), there was no difficulty in accounting for the source of the psorosperms. In 1853, Hessling discovered psorospermial sacs in the muscular substance of the heart, not only of the ox, but also of the sheep and roe (*b*). By him they were regarded as evidences of muscular degeneration. About ten years previously Miescher is said to have found similar bodies in the muscles of the mouse (*c*). In 1857, Rainey described precisely similar structures taken from the flesh of swine; and, in his able memoir, he went so far as to maintain that these bodies were neither more nor less than the early stages of development of the common pork-measle (*d*). This view is still, I believe, maintained by Mr. Rainey; but, in support of his theory, I am not aware that he can reckon upon the aid of any helminthological writer of distinction. Let me add, however, that for accuracy of description and detail, no communication either past or present is likely to surpass the one contributed by this

* One of the Messrs. Pickworth, of Goodge-street, W.

able microscopist. In the year 1858 Gubler wrote a most important paper bearing on this subject, in which he related a case where twenty cysts existed in the human liver (*e*). These sacs were of great size, mostly as large as a hen's egg, one of them being some six inches in diameter. Naturally enough, the largest was, during life, diagnosed to be that of an ordinary hydatid. Their nature, however, proved to be very different; for, on evacuating their contents, post-mortem, they were found to harbour enormous quantities of minute corpuscles strictly analogous to those obtained from the ordinary psorospermial sacs. Gubler believed he had stumbled upon masses of eggs of *Distoma hepaticum;* but, to show how fallacious this notion was, it may be mentioned, that whilst the eggs of the common fluke measure as much as $\frac{1}{114}$ of an inch in diameter, the corpuscles in question were only some $\frac{1}{1200}$ of an inch long. Shortly after Gubler, similar bodies from the human liver were described by Virchow (*f*); and in 1862 the subject was followed up by Dr. Dressler, of Prague (*g*). Dressler, also in the human liver, found a number of pea-shaped bodies, the milky contents (*breisubstanz*) of which displayed a multitude of the characteristic corpuscular elements just referred to. These particles, already considered as equivalent to, if not identical with, the so-called pseudo-navicellæ of gregarinæ, were now encountered by a variety of independent observers. From time to time Leuckart noticed these bodies in various animals; but with a caution natural to him he remarks:—"Concerning the nature of these formations I will not decide. To be candid, however, it appears to me to be in no way made out, whether the psorospermiæ are to be considered as the result of a special animal development, whether they, like pseudo-navicellæ, are the nuclei of gregariniform productions, or whether they are the final products of pathological metamorphosis" (*h*). Leuckart found these organisms in the intestines of a trichinised dog, also in a sheep and pig severally fed with trichinæ, in the muscles of another pig fed with psorosperms, and likewise, I believe, in the liver of various rabbits. He remarks that in swine these parasites, as compared with measles, are much more abundant. They were present in five of eighteen pigs, and also in two out of four sheep, whose flesh was specially examined by him in this relation. Valuable, however, as are the foregoing records, perhaps, in a pathological point of view, none equal in interest the observations of Lindemann at Nischney-Novgorod (*i*). This medical officer discovered psorospermial sacs attached to the hair of a girl who was being treated in hospital for chlorosis. I may remark, in passing, that the sacs in question bear a remarkable resemblance to the bodies which we now find in such abundance not only in diseased but also in healthy cattle; and it would appear, from Lindemann's observations, that the affection is not very uncommon amongst the people of the locality just named. Curiously enough, in connexion with and attached to the same parasitically affected hairs, Lindemann noticed several movable gregarinæ; and from this circumstance, in association with other considerations, he was led to believe in the existence of a genetic relation subsisting between the two kinds of bodies. He further expresses his conviction that the people contract the disease, if such it may be called, by washing themselves with water in which gregarinæ abound. Lindemann moreover refers to Lebert as having noticed similar parasites in a case of favus, and concludes that these organisms are of a vegetable nature. His opinion, though not shared by the majority of parasitologists, is nevertheless supported by the views of Robin (*k*), Leydig (*l*), and one or two others. Of still higher interest, also, are the observations of Lindemann respecting the occurrence of psorospermiæ in the capsule of the kidney of an hospital patient who died with Bright's disease. The sacs in this case were remarkably small; nevertheless, their corpuscular contents unequivocally indicated their true nature. The pseudo-navicellæ measured only the $\frac{1}{1000}$ of an inch in diameter. Here, however, I pause; yet, besides the above, many other able memoirs have appeared on the gregarinida, with which these bodies appear to be so intimately associated. Amongst the contributions, I would specially refer to those of Dufour (*m*); J. Müller (*n*); Creplin (*o*); Kölliker (*p*); Keferstein (*q*); Stein (*r*); Drummond (*s*); Lieberkühn (*t*); and E. Ray Lankester (*v*). To these I may add reference to my own previous observations (*v*). I doubt if the interesting vegetable organisms described by Prof. W. T. Gairdner (*w*) can be referred to the group of parasites under consideration. At all events, from the foregoing remarks I think it will be seen that these spurious entozoa, by whatever name called, were first discovered by Dufour in insects, by Müller in fishes, by Miescher in the mouse, by Dujardin in the mole, by Hessling in the larger quadrupeds, and by Gubler in man.

Let me now refer to our own recent experiences as regards the prevalence or otherwise of these bodies in diseased and healthy cattle; noting, at the same time, the circumstances leading to this inquiry. On the 7th of December last Dr. Fenwick invited me to examine his interesting series of microscopic preparations. I informed him that the bodies he had detected in such great numbers in the muscles of animals dying from rinderpest were the same as, or were similar to, those previously described by Hessling and Rainey. I expressed a wish that Dr. Fenwick would lay the facts thus made known to myself before the Pathological Society. Dr. Fenwick preferred to communicate his observations to a daily newspaper. He alluded to the source whence his information was obtained; but a "friend" who caused the letter to appear in *The Times* was pleased to strike out my name. Observing that the tenor of Dr. Fenwick's letter was likely to induce the public to confound the harmless parasites in question with trichinæ and other true entozoa, I endeavoured to check any injurious influence which might arise from this cause; and happily, by the courtesy of the editors of the *Daily Telegraph* and the *Standard*, I believe I partially succeeded. In doing this, it is probable that I insisted rather too strongly on the entophytic character of these bodies; nevertheless, let any unprejudiced observer compare the corpuscular contents of these sacs with the non-ciliated zoospores of the grape fungus, and he will not fail to observe a most marked similarity between the two. The placing of these bodies along with the entozoa, properly so called, is altogether out of the question, their characters in no respect conforming with those of helminths, even in the earliest phases of development of the latter. It is best to regard them as parasitic protozoa, having more or less striking vegetable affinities.

So much has already been made known respecting the structure of the psorospermiæ that I desire to avoid unnecessary details; yet, as regards those which I have recently examined, I must add one or two particulars. In the flesh of cattle I find the sacs varying from $\frac{1}{114}$ to $\frac{1}{17}$ of an inch in length, and in that of sheep from $\frac{1}{114}$ to $\frac{1}{70}$ of an inch. The bodies are enclosed in a well-defined transparent envelope, and even under low magnifying powers, their contents exhibit more or less distinct indications of segmentation. In some specimens the segments display themselves as a complete cell-formation, the contents of each individual cell being uniformly granular. Even under the quarter-inch objective, the contained granules are clearly visible, and on rupturing the sac, their peculiar characteristics are at once manifest. Each granule or corpuscle represents a pseudo-navicel, all of them displaying a tolerably uniform size, which I calculated to average about the $\frac{1}{1000}$ of an inch in diameter. Some of the corpuscles were round, others oval, several bluntly pointed at one end, many curved and fusiform, not a few being almost reniform. Under the quarter objective highly refracting points or nucleoli were fairly visible in their interior, but on employing the one-twelfth, I made out nothing more respecting the contents of the corpuscles. This was, perhaps, in some measure due to the glass covers employed being a trifle too thick.

Turning to the more obviously practical aspect of the subject, let me at once remark, that these bodies have nothing whatever to do with the cattle plague. No one, it is true, who has had an opportunity of examining the flesh of any number of animals dying of rinderpest has, so far as I am aware, failed to discover them; yet in one or two isolated instances they appear to have escaped notice, and may possibly not have been present. When it is considered how long it takes us to examine a few grains weight of muscle carefully, it is obvious that the body of a large beast might contain many hundreds, or even thousands, of these spurious entozoa without our being able to detect their presence, except by a very prolonged and unnecessary investigation. In the few rinderpest beasts, portions of whose flesh I have submitted to the microscope, I should say that there were not more than one hundred of these bodies in an ounce of meat; but in the heart of a healthy sheep (which I afterwards ate) I calculated there were about a thousand parasites to the ounce, and in the heart of a healthy bullock (which likewise served me for a meal) their numbers were probably rather in excess of those in the sheep. Altogether, at two meals, I could not have swallowed less than 18,000 of these psorospermiæ; yet had they been trichinæ, I should have hesitated to have dined off this food, however thoroughly well cooked the meat might have been. The fact is, I believe, that lovers of beef, mutton, and pork eat these bodies every day, but take no harm because the parasites in question are not entozoa in any proper sense of the term. The fine healthy beef to which I alluded at the outset, and which was returned by

an alarmed customer, was, in my opinion, as good as any other meat in the market; and yet, of all the portions of flesh I have examined, including veal, pork, and mutton, in none did I find so great an abundance of these falsely so-called entozoa. I should say, without exaggeration, that a single ounce of the flesh contained upwards of 2000 parasites!

In conclusion, I am almost tempted to enter upon some of the scientific questions arising out of the study of these organisms, but I have already, I fear, occupied too much of THE LANCET's valuable space. I defer, therefore, what I have to say on this head to some future occasion, offering meanwhile the subjoined bibliography, which may not be unacceptable to some at a distance who are engaged in investigating the nature of the bodies here described.

(*a*) Hist. Nat. des Helm., 1845, p. 643. (*b*) Sieb. and Köll. Zeitsch., 1853, bd. v., p. 196. (*c*) Quoted by Leuckart and Siebold. (*d*) Phil. Trans., 1857, vol. 147. (*e*) Mém. Soc. Biol., 1859, p. 657, and Gaz. Méd., 1858, tom. v., p. 61. (*f*) Arch. für Path. Anat., bd. xviii., p. 523. (*g*) Quoted by Leuckart. (*h*) Die Mensch. Paras., 1863, bd. i., p. 141. (*i*) Quoted by Leuckart. (*k*) Les Végét. Paras., 2nd ed., p. 291. (*l*) Müller's Arch., 1851, p. 221, and Micros. Journ., 1853, p. 206, and Arch. für Anat. u. Phys., 1863, p. 191. (*m*) Ann. des Sci. Nat., 1837. (*n*) Arch., 1841, p. 477. (*o*) Müll. Arch., 1842, p. 61. (*p*) Zeitsch., 1848–49. (*q*) Gött. Anzeig., 1862, p. 1608. (*r*) Müll. Arch., 1848, and Ann. Nat. Hist., 1850. (*s*) Edin. Physiol. Soc. Rep., June 19th, 1852. (*t*) Müll. Arch., 1854, p. 349, and Reich. and Du Bois-Reym. Journ., Sept. 1865, and Micros. Journ., Jan. 1866. (*u*) Ibid., 1866, p. 23. (*v*) Proc. Linn. Soc., May 1862, p. 245, and Intell. Observ., 1862, p. 199. (*w*) Edin. Phys. Soc. Rep. for March 19th, 1853.

Wimpole-street, Jan. 1866.

ON

SOME EFFECTS OF ACUTE ALCOHOLISM.

BY STEPHEN H. WARD, M.D. LOND.,

PHYSICIAN TO THE SEAMEN'S HOSPITAL, "DREADNOUGHT," AND TO THE HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

(*Concluded from page* 5.)

ORDINARILY, the excessive abuse of alcohol does not result in death, and still less frequently in the series of nervous symptoms exhibited in the second case reported in the previous portion of this paper. The poison has scarcely been imbibed before the process of eliminating it from the system by the several excretory organs commences. The sense of smell detects it in the air breathed out from the lungs, and often also in the perspiration; altered physical characters, and certain chemical tests, show its presence largely in the urine. No better illustration of the reparative powers of the human frame could be adduced than the rapid and complete manner in which individuals usually recover from acute alcoholism. Repeated intoxications will, however, after a few days, induce a protracted congestion, and consequent functional disturbance of brain, characterized by a series of symptoms intermediate between those of phrenitis and the delirium tremens of old drunkards. Instead of the busy, rambling delirium, the weak, compressible pulse, the perspiring skin, the moist, creamy tongue, which mark the latter affection, we have rather an excited state of circulation, a dryish skin and tongue, and frequently active dyspepsia from congested mucous lining of the stomach, and bilious vomiting from irritation of the liver. The delirium, also, is of a more active character, the conjunctivæ are congested, and the pupils contracted. Cases in which we have such symptoms constitute the third class illustrative of the effects of acute alcoholic blood-poisoning. The subjects are generally young men, who previously, from compulsion, not choice, have been temperate for weeks or even months. The lad who died soon after admission to the *Dreadnought* was only eighteen years of age; the man who had the paralytic symptoms was only twenty-eight. In sixteen out of twenty-six cases, of which I have the notes by me, the age was under forty. The following, recorded by Mr. Leach, the resident medical officer, may be taken as fair illustrative cases.

W. E——, aged thirty-four, admitted into the *Dreadnought* Hospital Ship on the 29th of December, under the care of Dr. Ward. The patient had been discharged from his ship a week previously, after a voyage from India, and immediately commenced a course of malt liquor and rum, which was continued uninterruptedly for seven days. During that space of time his average daily consumption amounted to no less than fifteen glasses of rum, and from two to four gallons of porter or ale. On one or two occasions twenty glasses of rum were taken. This last is the patient's third cerebral attack. The first occurred at the Cape, after a debauch of seven or eight days, the liquors consumed being several bottles of Cape wine and six or eight glasses of brandy daily. The second illness occurred in London, commencing after fourteen days' hard drinking, during which time about twenty glasses of rum and two to four gallons of beer appear to have been the daily allowance.

The ferrety eye, hot skin, and dry tongue were well marked in this case. The man became violently delirious some hours after admission, and direct restraint was necessary for a time. Close watching was required for three nights. The patient took fluid food tolerably well. All symptoms gradually subsided, and he was discharged well at the end of ten days after admission.

The treatment in this case was purely expectant, a coloured placebo and two black draughts being the only medicines administered. The diet consisted of milk, beef-tea, and diluents *ad libitum*; no stimulating fluids of any kind were given, and all unnecessary restraint was avoided.

R. C——, able seaman, aged thirty-eight, admitted into the *Dreadnought*, under the care of Dr. Ward, on Dec. 28th last. This patient had recently arrived from Calcutta, and having been paid off, spent ten days in consuming various kinds and quantities of alcoholic drinks, mostly rum and beer. The average daily consumption of this man appears to have been from twenty to thirty glasses of the former, and a pint or two of the latter taken now and then during the day, or, to use his own words, "on and off, quite promiscuous." His general health appears to have been very good; but the first of three attacks to which he has subjected himself occurred at Demerara. The crew of his vessel, consisting of five men, sat down one afternoon with a bucket of new rum, considerably over proof, before them. The bucket contained two gallons. They speedily drank themselves to sleep, and awoke, one to die in hospital the next day, the others to get over more or less severe attacks of congestion of the brain. The second attack appears to have been mild and of short duration. On this, the third occasion, the patient was brought into the *Dreadnought* with black eyes and contused nose, trembling in gait, and quite incoherent in speech. A watchman was placed over him immediately, and this was necessary the three following nights. No direct restraint was required, and he was discharged, cured, eight days after admission.

These patients were treated in all respects alike; but the latter made a speedier recovery, appearing to have more constitutional stamina than the man whose case is first recorded. Neither stimulants nor opiates were given in either case.

When I first became connected with the *Dreadnought*, I found it the custom to treat cases such as the above by small doses of opium frequently repeated, and by a fair exhibition of stimulants. Such treatment seemed to answer very well for the delirium tremens of the more advanced and broken-down drunkards among the sailors, but not for the more acute cerebral congestion of the cases in question. It frequently, I am satisfied, rather tended to prolong excitement, and sleep was by no means readily induced by it. For some years, however, after my connexion with the hospital this line of action was persevered in; opium, at times in small, sometimes in large doses, and alcoholic stimulants, being always given. Some years back, notwithstanding the conflicting opinions of different observers as to the action of digitalis in delirium tremens, it struck me that in the cases of which I am treating, if in any, the administration of this drug might be attended with beneficial effects. It was accordingly given in every successive case that was admitted for a considerable period; generally in doses of two drachms of the tincture, sometimes in larger doses. The result, on the whole, was more satisfactory than that which had attended the previous line of treatment: the cerebral excitement seemed to subside and sleep to follow more rapidly, and the patients left the hospital in a shorter period. No marked depression of the circulation or other bad effects seemed to attend the action of the drug. It was a question, however, how far the more favourable results were due to the digitalis or to the supporting nourishing regimen and absence from stimulants which were associated with its exhibition. It was decided, therefore, to try the rational expectant plan of treatment, as it has been termed: to abstain from special

medicines and stimulants, to administer nourishment freely, and to give the patients the advantage of rest and even temperature ensured by keeping them under watch, but not under restraint, in bed. There was nothing novel in this course when it was adopted at the *Dreadnought*. In 1859, Dr. Laycock had advanced the view, subsequently insisted upon by others, that delirium tremens was due to the effects of prolonged debauch, not to the withdrawal of the accustomed stimulus; and he urged, as an inference from this view, that a supporting and eliminatory plan of treatment was the one to be adopted. Such plan has now for some time been had recourse to at the *Dreadnought*, and the result has, with scarcely an exception, been satisfactory. In one or two cases which terminated fatally by coma there was either renal or cardiac mischief.

Finsbury-circus, January, 1866.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF ABSCESS OF THE BRAIN FOLLOWING A KICK; TREPHINING; EVACUATION OF THE CONTENTS; DEATH.

(Under the care of Mr. HULKE.)

HERE are two cases of head injury which are very interesting. In the first, the bone resists the force of the blow, which is thus communicated to the brain-substance, and inflammation followed by abscess results. In the second, the bone is smashed, and the violence goes no further; the brain completely escapes injury. The case of an apparently trifling scalp wound leads to death; that of compound fracture of the skull makes a speedy recovery. In Holmes's System of Surgery, vol. ii., p. 102, Mr. Hewett relates in his interesting article, "Injuries of the Head," a case closely resembling the first of these. A girl had a scalp wound from a blow upon the head. Three weeks afterwards, symptoms appeared which induced the surgeon to trephine. "No matter was found on the dura mater, which, however, was whiter and thicker than usual, except at one point on the margin of the trephine-hole, where there was a red spot; this proved to be a small hole in the dura mater, into which the flat end of a probe was passed, whereupon a quantity of most offensive matter spirted out."

An Irishwoman, aged thirty-six, was knocked down in a brawl, and received a scalp wound upon the right frontal eminence from a kick. Little attention was paid to it, and she continued to lead an irregular life. About a month afterwards she was occasionally incoherent, but her friends thought little of this till she had a fit, upon which they brought her to the hospital on Aug. 25th, 1865. Soon after admission she had a second fit, after which she complained of headache, moaned, and sweated profusely. On the 26th, at half-past three P.M., when seen by Mr. Hulke in Mr. Nunn's absence, she answered questions pertinently, and gave a coherent account of the way in which she had received the injury; but when not spoken to she sometimes talked to herself in a rambling manner. At the right frontal eminence there was a scalp wound three quarters of an inch long; its edges were puffy, and a thin scanty ichor oozed from it. The scalp was separated from the bone over a circle about an inch in diameter, and with a probe a slight chink was felt, but whether this was a fissure or the groove around an exfoliating piece of bone could not be ascertained in this way. The skin was dry and pungent; pulse 112; tongue dry. Circumscribed inflammation of the membranes and brain-tissue in the neighbourhood of the injury was diagnosed. A bag of ice was laid on the head, and her bowels not having acted for several days, she was given eight grains of calomel, followed by an enema. In the course of the evening she passed three copious and very offensive stools.

At nine o'clock the following morning she had a third fit; it lasted three minutes. Her mouth was drawn to the right, and she foamed. At ten o'clock Mr. Hulke, who had been sent for, found her semi-conscious, talking incoherently, and moving her right arm restlessly to her head. Her left arm was rigidly flexed; the left leg was rigid, but extended; both were completely paralysed, and none but the slightest reflex movements could be excited. Pulse 120, small. It was decided to trephine. When the scalp was turned off, the bone bled slightly, except a small patch the size of a silver threepence, which was surrounded by a shallow groove of separation. This piece of bone was cut out with a small trephine. When the inner table was divided, a bead of pus oozed up through the slit, and the moment the circle of bone was lifted out with the elevator, three or four drachms of pus were forcibly ejected to the distance of a couple of feet. It came through a small ragged hole in the dura mater. This escape of pus was followed by a copious pulsatile oozing of turbid curdy serum. The exposed dura mater was soft, dull and grey, and swollen. Around the opening in the skull it adhered to the bone, or, if organically separated, was at least most closely applied to it. A layer of wetted cotton-wool was laid upon the wound. The trephining was immediately followed by relaxation of the left arm and leg, previously rigid, and the right arm became lax and paralysed. Consciousness did not return. There was much bronchial râle. She died at a quarter-past twelve o'clock, about two hours after the operation.

At the post-mortem examination next day, the trephine-hole was found plugged with clot and broken down brain-tissue, which protruded into it through a small hole in the dura mater. When the skull-cap was removed, the surface of the dura mater around the hole for the space of a crown-piece was swollen, and yellowish from infiltration with pus, and the bone to the same extent had a similar appearance. On attempting to raise the dura mater from the brain, it was found to adhere to the pia mater at the limits of the discoloration. Corresponding to the aperture in the first membrane there was the orifice of an abscess in the anterior lobe of the right cerebral hemisphere, which had burst superficially, and extended along the surface till arrested by the adhesion of the membranes, and had broken deeply into the anterior horn of the lateral ventricle, which contained a few drachms of thin, flaky, purulent serum. The cavity of the abscess was irregular; one branch of it ran into the corpus striatum. Its capacity was estimated at one fluid ounce. Its surface was ragged and flocculent. The surrounding brain-tissue was succulent, greenish, and dotted with minute extravasations of blood. The pia mater covering the upper surface of the left cerebral hemisphere was œdematous, and at the base of the brain, upon the under surface of the cerebellum, pons Varolii, and inter-peduncular space, was opaque, and dotted with capillary apoplexies.

COMPOUND FRACTURE OF THE FRONTAL BONE; REMOVAL OF SEQUESTRA; RECOVERY.

A fair, ruddy boy, aged eight years, was admitted on the 6th of September, 1864, with a puffy swelling of the right side of the forehead, in which there were three sinuses leading to loose sequestra. Fourteen weeks before he had been struck with a whip-handle. The blow was not heavy, and at the moment he thought little of it. On the following morning his right eye was closed by swelling of the eyelids; and a few days later an abscess broke in the situation of the present sinuses. No brain-symptoms had ever been present. The sinuses were slit open, and several eroded sequestra lifted out. They comprised both tables of the frontal bone; and, after their removal, the dura mater was visible. The pulsations of the brain were seen and felt. The wound healed quickly, and he was discharged in October. The brow was flat where the bone was gone, and the brain-pulse was still, though less strongly, perceptible at this spot.

Early in December a case was admitted into the same hospital, under the care of Mr. De Morgan, which may be conveniently coupled with these.

A man was run over by a heavy cart. One side of his face was literally smashed to pieces: the frontal bone so broken that the orbitar plate was lifted away, as well as a large piece

of the anterior part of the frontal bone, and all the substance enclosing the frontal cells. The anterior lobe of the brain of one side was thus completely exposed, and could be seen pulsating. Notwithstanding this frightful injury, the man walked to the hospital, helped to undress himself, ate, drank, and talked composedly from the Friday to the Sunday, when he became delirious and died.

ST. BARTHOLOMEW'S HOSPITAL.

STRANGULATED FEMORAL HERNIA; OPERATION; INTESTINE GANGRENOUS; ARTIFICIAL ANUS; RECOVERY.

(Under the care of Mr. THOMAS SMITH.)

IN the article "Hernia," (Holmes's System of Surgery,) Mr. Birkett has denounced in just terms of indignation the culpable error sometimes committed by medical men in postponing an operation for the relief of strangulated hernia. It is, indeed, marvellous that at the present day, when one would imagine the importance of prompt measures was recognised by the veriest tyro in surgery, we should still frequently see cases sent into hospital only after an amount of delay which is fatal to the patient's life. In the case which we shall briefly narrate, life was not sacrificed, but the patient ran a risk from which few escape.

H. M——, a man aged forty-five years, the subject of an irreducible femoral hernia of seven years' standing, was admitted into the hospital on Sept. 27th, 1865, the bowel having been strangulated for four days. He had had constant vomiting for three days. We need scarcely say that when admitted he was operated upon without any delay. All the parts were found adherent. The sac was much thickened, contained a small quantity of chocolate-coloured fluid, and its inner surface was lined with recent lymph. A stricture which was found at the neck of the sac was divided. The bowel itself, being of a dark-blue and brown colour—evidently mortified,—was not returned into the abdominal cavity. The wound was left open; the bowel was attached to its edges by silver-wire sutures, and was laid freely open; the fæces were subsequently discharged entirely from the opening.

We saw him again on Oct. 7th. He was free from distress; the pulse quiet but weak. The edges and neighbourhood of the wound were red. For several days after this, as he had become low, two ounces of brandy were administered daily by enema. Late in October he was able to dispense with this, and took all nourishment by the mouth. His pulse was small but good, and the wound was contracting. Collodion was applied to the neighbourhood of the wound for some time, in order to protect the skin from the irritating discharges. At no time was the discharge very feculent in odour, leading to the opinion, therefore, that the portion of mortified bowel belonged to the upper part of the canal. The wound became gradually more contracted, and the quantity of fæces passing by it less and less,—the natural outlet coming again into action. He was discharged at his own request towards the end of November. At that time the wound was very small, and gave exit to but a slight oozing, almost all the fæces passing by the rectum.

UNIVERSITY COLLEGE HOSPITAL.

(OBSTETRIC DEPARTMENT.)

TWINS; ARM PRESENTATION OF SECOND FŒTUS, WITH SPONTANEOUS EXPULSION; LIVE BIRTH.

(Under the care of Dr. GRAILY HEWITT.)

THE subject of this case was Mrs. G——, who had had five children, and no miscarriages. She was attended in this, her sixth labour, by Mr. Read, the obstetric assistant, and by Mr. Pollock, who gives us the following description of the interesting particulars of the case.

The labour began on Dec. 31st, 1865, and when first visited at six P.M., it was found that the waters had escaped for some little time; that the os was slightly dilated; pains of a grinding character and infrequent; at nine P.M. but little advance. At midnight a child was suddenly born while the patient was in a standing position; it fell on the floor. On examination it was found that there was a second child, the head of which was felt in the left iliac fossa, but the fœtal heart could not be heard. A binder was then applied. On Jan. 1st, at half-past two A.M., ergot was administered, and the membranes were ruptured by Mr. Read. Soon an elbow was found presenting, and the labour proceeded with such extreme rapidity that although version had been determined upon, Mr. Read deemed it advisable to allow it to come down in the position mentioned, the pelvis being large and the child small. The arm was extended beyond the vulva; the child lay almost transversely, in the dorso-anterior position; the arm pressed against the left side of the pubic arch. The body and lower limbs now rapidly descended, moving round the part which lay against the left side, and largely distending the perineum. The lower limbs and the body were expelled first, the perineum escaping injury notwithstanding the great strain upon it. The head remained in the vagina, and the expulsive action ceased. The delivery was completed by placing the finger in the mouth, and depressing the chin. The child was born alive at a little before three A.M. Ergot and brandy were at once given, and in ten minutes the placentæ, which were separate, were expelled. Ten days after delivery the mother and both children were doing well.

In his clinical remarks to the class on this case, Dr. Graily Hewitt stated that this was a most interesting instance of an event not very commonly observed in obstetric practice; the facts were well observed, and deserving of record. Of this spontaneous expulsion and evolution as a mode of delivery in transverse presentations a tolerable number of instances have been recorded since Denman first directed attention to it. The present case was remarkable in that the event was so favourable for the child, this mode of delivery being almost invariably destructive of its life. The child was in this case small, and the pelvis capacious. The size of the pelvis probably occasioned the transverse presentation, but at the same time it allowed more easily the evolution of the child, and its expulsion. With reference to the mechanism of the delivery, it is both spontaneous evolution and expulsion; the evolution, however, is of a peculiar character, for it does not take place round the centre of the child's body, but round the presenting part which presses against the side of the pubic arch. The arm originally presenting does not retire during the expulsion of the other extremity of the body, as Dr. Douglas first demonstrated. The mode of delivery in this case perfectly resembled that observed in other similar cases.

ST. MARY'S HOSPITAL.

(OUT-PATIENT DEPARTMENT.)

CASES ILLUSTRATING THE USE OF BELLADONNA AND BROMIDE OF POTASSIUM IN EPILEPSY.

(Under the care of Dr. BROADBENT.)

DR. BROADBENT has for some time been engaged in observing the effects of two remedies—belladonna and bromide of potassium—in epilepsy, in cases where no positive indication for treatment has existed in deranged function of abdominal or other viscera. The belladonna is given in the form of extract in gradually increasing doses till the physiological effects—dilatation of the pupil, with dryness and redness of the fauces, &c.—become apparent. The quantity is then slightly diminished, so as to allow the unpleasant symptoms, such as the sense of constriction of the throat, to pass away; but the pupil is kept dilated for about a month, when the administration is suspended for a short time, to be again resumed. No precise rule has been followed with the bromide. It has generally been given in some bitter infusion, with compound spirit of ammonia.

A few of the cases which have been sufficiently long under observation to furnish results are given, classified according to their probable causation, malformation, or organic disease of the brain, injury to the head, sexual irregularities, &c.

ORGANIC AFFECTIONS OF THE BRAIN.

E. T——, an idiot boy, aged eleven years, partially hemiplegic on the left side, the limbs not contracted, the arm hanging, the leg dragging, had, when brought to the hospital on the 6th of April, 1865, three or four fits every day, and six or seven in the night. His mother had paralysis of the left facial nerve, which came on twelve months before he was born. She had a fall also about a fortnight before she was delivered of him.

The boy was ordered one-third of a grain of extract of belladonna three times, and then four times, a day. On the 20th of April, half a grain, with the same directions. Considerable improvement followed; and in the week ending May 18th he had only three fits. On the 25th, however, he had been poorly all the week, did not walk so well, and had had fits every night. The pupils were greatly dilated. It was not considered prudent to go on with the belladonna, and the bromide of potassium was given in doses of six grains, increased on June 15th to eight grains. The fits at once diminished in frequency, and he improved in every way till June 13th, when he was worse than ever. The bromide was suspended for a time, and again resumed; but in October, when he ceased to attend, there was no marked improvement, though the fits were not so numerous as when he first began to attend.

A. H——, when first seen Sept. 16th, 1863, was four and a quarter years old. He had nine or ten fits every day, the first having occurred when he was a year and a half old, and in it the left arm became paralysed and contracted, and had remained in this condition. He was well nourished. The head was large and remarkably long; narrow, projecting, and almost pointed posteriorly; flattened on the top; concave at the situation of the anterior fontanelle. He had an intelligent look, and was said to be talkative.

Belladonna was given in gradually increasing doses, and the fits slowly diminished in number till, on Nov. 25th, he was said to be better than at any time for two years. On Dec. 4th numerous fits occurred, and he was insensible for two days afterwards. There was now loss of power in the right arm as well as in the left; the arm could be moved, but it jumped. The belladonna was continued. The fits averaged seven a week till the 23rd, when he had seven, and on the 26th twenty-five. On January 20th, 1864, he had only had two fits in twelve days; then he was in fits for an entire night.

These alternations continued—the intermissions being at times so long as to give encouragement in the use of belladonna—till July 11th, when the bromide was given, at first in doses of three grains, and it seemed to have some good influence. The quantity was raised successively to five, six, and eight grains; and from the beginning of Sept. 1864 to the end of Jan. 1865 he had only occasional slight attacks, the weekly reports being "no fits," or one, two, or three (once seven), but "not to go off." He could also open the left hand, which had hitherto been firmly clenched, and seemed better in every respect. On Feb. 3rd, however, and on the 16th and 17th, he had numerous fits. The dose of the bromide was increased on the 3rd to ten grains. On March 31st he had again severe fits, which affected his speech; also on April 12th, after which he was deaf for a time. Early in May the remedy was suspended for ten days, but, the fits returning with great severity, it was resumed. He again became better, and ceased to be under Dr. Broadbent's care in June.

CASES ATTRIBUTED TO BLOWS ON THE HEAD.

E. E——, aged fifty. First seen on January 29th, 1864. Subject to epileptic fits for nine years. They came on after an injury to the head by a fall from a cab, which left an extensive scar on the left temple. At one time had no fit for three years. Lately has had two or three a month. Is weak and nervous. Treatment: belladonna in gradually increasing doses, beginning at one-sixth of a grain, and going on to one-third, one-half, and two-thirds, three, four, and six times a day; tincture of muriate of iron, ten grains, twice a day. On March 7th he had a sensation of weight over the eyes and of fulness of the face. On the 13th he bled from the nose. On March 3rd and April 29th he had a fit. Having had no further fit, he ceased to attend in June.

July 1st.—He returned, having had a fit. Treatment: bromide of potassium, five grains, three times a day.

Aug. 29th.—No fits during the two months. Ceased to attend.

Oct. 19th.—Again applied, having had a fit on Sept. 26th, and another on Oct. 12th. Bromide of potassium, six grains.

Dec. 12th.—No fits. Disappeared.

Jan. 18th, 1865.—After being without medicine for a month, three fits. Bromide of potassium, eight grains, and then ten grains.

The patient now continued to attend till the end of May. Had no fit during this time, and has not returned, as he probably would, if the fits recurred.

B. J——, aged forty-two. May 4th, 1865. Fits and pain in the head for five months. Never more than a fortnight's interval between the fits, sometimes four or five a day. They come on with a blue flame before the eyes for five minutes before he goes off. Having this warning, he does not fall, but lies down, screams, foams at the mouth, and is convulsed. No assignable cause, except a severe blow on the head seven years previously. Ordered, bromide of potassium, ten grains; compound spirit of ammonia, twenty minims; infusion of gentian, one ounce: three times daily. In attendance till October 2nd. No fit during this time.

CASES ATTRIBUTED TO DERANGEMENT IN FUNCTION OF SEXUAL ORGANS.

A. B——, aged twenty-three, dressmaker. Subject to fits of epileptic character, coming on monthly ever since establishment of menstruation five years before. Catamenia regular. Has leucorrhœa. Believed to practise masturbation. Face disfigured by acne rosacea. Bowels constipated. On March 13th, 1865, she was ordered five grains of bromide of potassium (soon increased to ten grains) in infusion of calumba, and aloes pill as occasion required. Remained under observation till Nov. 13th, the general health improving, but the fits returning at about the usual intervals and with the same severity.

S. E——, aged thirty. Suffering from menstrual irregularity and frequent fits, with nocturnal incontinence of urine. Was under observation from Oct. 30th to Dec. 21st. Treatment: belladonna, beginning with doses of one-third of a grain, pushed till the physiological effects were manifested; tincture of muriate of iron, fifteen grains, three times a day. The fits became less frequent and violent, and the incontinence was removed.

A. S——, a boy aged thirteen, who practised masturbation. Had had fits for two years at intervals of about a month, but not severe. Bromide of potassium, in six-grain doses, had no apparent influence on the disease from June to September, but it was taken rather irregularly.

A case of epileptoid hysteria of eighteen months' duration, in a woman aged thirty-four, who suffered from menorrhagia and leucorrhœa, with bearing-down pains, was at once relieved by bromide of potassium, in doses of ten grains. Began to take the bromide on April 6th. Had no fit till June 19th, when it had been suspended for three weeks, bismuth having been given in the meantime for the relief of dyspeptic symptoms. On July 3rd she had again attacks, but of so slight a character that it was not considered necessary to resume the administration of the bromide. She continued under observation till Nov. 30th, when she seemed to be nearly well in all respects.

NO ASSIGNED CAUSE.

F. S——, aged forty-one, a smith. Fits once a week for twelve years.

July 31st.—Bromide of potassium, ten grains, three times a day,—subsequently increased to fifteen grains.

Oct. 8th.—Fits have occurred much as before.

A. R——, aged thirteen. Epilepsy two years. No fits for ten months till lately; now every day.

Sept. 18th.—Lost his voice on the 14th. The aphonia is laryngeal and absolute—no sound even on coughing. Eats well; sleeps, but always has a fit on waking. Bromide of potassium, ten grains.

Oct. 1st.—Voice suddenly returned. Fits as before.

8th.—Again voiceless.

23rd.—Voice restored at ten A.M. Only two fits in eleven days, not so severe, occurring, as before, at the moment of awaking. Ceased to attend.

J. C——, aged twenty-two, a muscular Irishman. For fourteen or fifteen years has been subject, at intervals of two or three months, to attacks of a peculiar character. Applied on May 4th. He loses his senses many times in the course of the day; does not fall; would like to sit down, but often walks away or goes on with his work in a state of unconsciousness; has great pain in the head during the attacks, and knows a day beforehand when they are about to come on; is as well as ever afterwards. Bromide of potassium, six grains, then twelve grains, three times a day.

July 31st.—Ceased to attend; no better.

This limited number of cases cannot be considered to suggest, still less to establish, any general rule. They show, however, that both belladonna and bromide of potassium, but especially the latter, exercise a marked influence on epilepsy. Some authors would not consider the first two cases, in which the attacks frequently came on many times a day, and were symptomatic of cerebral disease, to belong to epilepsy, strictly

speaking. An attack which took place during one of the visits, in the second case, had, however, all the characters of an epileptic seizure.

The good effects of the bromide were most evident in the cases conceivably attributable to injury to the head—that is, where no other cause was assignable, and a severe blow had been received. Least so, in the cases associated with functional derangement of the sexual organs. Possibly, in these, larger doses might have given better results.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JAN. 9TH, 1866.

DR. ALDERSON, F.R.S., PRESIDENT.

ON CERTAIN PRACTICAL POINTS IN THE PATHOLOGY AND TREATMENT OF LATERAL CURVATURE OF THE SPINE.

BY RICHARD BARWELL, F.R.C.S.,

ASSISTANT-SURGEON TO CHARING-CROSS HOSPITAL.

CERTAIN cases under the care of, certain investigations undertaken by, the author, led him to perceive that the lateral flexibility and rotatory power of the spine during movement of the limbs had not received sufficient attention either in a physiological or curative point of view. The results of his experiments may be thus briefly stated. The act of walking produces serpentine undulations of the spine. When the weight is on the left leg, and the right behind about to be lifted from the ground, the lumbar spine curves to the right, and the dorsal to the left. In bringing the right leg forward, the column straightens; and, when that foot is put down, the curve reverses, again becomes straight as the left foot is brought forward, and so on. Some peculiarities of these inflexions induced the author to extend the number of his observations on living persons. The lateral movements of the spine, as above described, were found constant in character, various in amount, and with each lateral bend a commensurate amount of rotation takes place. The spinous processes always incline towards, the front of the vertebræ from, the chord of curvature. In fact, Mr. Barwell declares the spine incapable of assuming a lateral bend without at the same time undergoing rotation, which although, perhaps, in part due to the reason given by Shaw, the sideways distribution of the weight, is also caused by the lateral and posterior position of the forces which bend the spine, and more especially by the action of the semispinalis dorsi and rotatores spinæ muscles. To ascertain the amount of rotation of which the spine is normally capable, the average of ten experiments was taken. The normal rotation-average was 43° 17'; the largest amount just over 49°. Movement and weight-bearing with the arms also produce a certain amount of lateral flexion, whose object is twofold—fixation of the spine as a sure basis of action for the shoulder, also balance and economy of power. This flexion is not produced by direct action of the muscles passing between spine and scapula, but by the spinal muscles proper on the opposite side. Thus the column is constantly bending laterally and rotating. These positions are, therefore, not in themselves abnormal, but may become morbid either by fixity or amount. A posture much beyond what the spine can normally assume may, nevertheless, be simply due to muscular action on the one side, inaction on the other; but such cases will (unless treated) overstep the limits of any posture muscular force can produce, and are then due also to some external agency—weight, relaxation of ligament, alteration of bone-surface, &c. But these organic changes are always secondary. Want of balance between muscular forces, either by redundancy or deficiency, is the primary and efficient cause of lateral curvature; and our treatment must be directed to restoration of that balance. The mere transference of a weight always carried on one arm to the other side, will not merely be inefficient, but often injurious; so also are many of the exercises prescribed for the left arm. The author, taking advantage of the necessity of balance, and the consequent normal tendency to form double curves, throws the spinal column out of its abnormal balance and rest on the ligaments by causing the pelvis to slope downwards from left to right, thereby necessitating a lumbar curve to the right, a position which, if carefully watched, cannot be long maintained without producing a contrary curve in the dorsal region. Thus in both parts of the spine a posture the reverse of the abnormal is enforced, not by machinery, but by muscular action. Several exercises are used by the author. A few are described as most potent: 1st. The sloping seat, with a fall commencing at an inch and a half in the foot, used for a quarter of an hour thrice a day. 2nd. Lateral gyration of the body, in strict measure, with the back against the wall, the pelvis sloped by a block under the left foot. 3rd. The patient, standing with the feet together, knees straight, a block under the left foot, lifts the left hand over the head, and in it is placed a spring attached above and to the right side. This is extremely potent, and requires careful watching. Certain other contrivances—viz., a thicker sole to the left boot, weighting the right leg and left arm, are used only late in treatment. Against rotation, the following exercise is given:—The patient, standing with the right shoulder about three inches from the wall, lifts the left hand over the head, and leans over till it comes against the wall, and supports some of the weight. She then, with the feet together, passes the head and right shoulder under the left forearm, and tries to see as much as possible behind the left shoulder. All these exercises must be used with caution and generally in the order above given, though variations may occur for particular cases. After each, horizontal repose is to be enforced. In all but very slight cases, these exercises will not suffice without some form of support. The machine commonly called a spinal support is false in principle, aiming at superseding muscular action, thereby weakening the muscles; moreover, it is clumsy, heavy, and barbarous. If it fulfilled its office of keeping pelvis, spine, and shoulder stiff and immovable, it would be unbearable; not fulfilling its office, it is merely irksome and inefficient. A patient with moderate curvature can be straightened by placing one hand on the point of greatest dorsal excurvation, the other in the opposite axilla, and pressing in contrary directions. The bandage invented by Mr. Barwell is so contrived as to prolong this action in the same directions. It consists of webbing straps secured to the pelvis, to the right side below the point of greatest curve, and to the left shoulder. In certain parts of the webbing, strong india-rubber springs are placed in such wise that the forces act from the pelvis exactly in the directions of greatest mechanical advantage, such as in practice are found most efficacious in straightening crooked spines. By placing the pad at the right side, a little posteriorly, much power may be exercised on the rotation. The construction of the bandage is such that there is no tendency to flatten the ribs against the spine. The whole apparatus weighs but a few ounces, is worn with ease and relief, and is very efficacious. By means of the exercises above described and the bandage, the action of them being rigidly under surveillance, the author has been very successful in the treatment of even advanced curvatures, as is shown by the appended cases.

THE PRESIDENT said that many present would be able to give opinions as to the author's able and interesting paper. He remarked that if such papers were not well received by medical societies, they would be read at societies for general sciences. For his part, he had an aversion to mechanical restraints. If girls were brought up as boys are, there would be fewer curved spines. The President then spoke on the bearing of mathematics on the subject, and said it was one dangerous to touch without a knowledge of the higher branches of mathematics. He spoke also of the risk of damaging the pelvis in trying to remove the curvature of the spine.

MR. WM. ADAMS was glad that the subject of lateral curvature of the spine had been brought before this Society, as there were so many members present who could contribute to its elucidation. He had listened with attention to the paper in the expectation of hearing some new pathological facts, or some new theory of the production of lateral curvature, or some new system of treatment; but in all these respects he had been disappointed. Mr. Barwell had relied upon physiological experiments and observations upon the production of curvature in certain attitudes; but all that he had said upon these subjects had been long since brought before the profession in the very excellent treatise by Mr. Bishop, who had thoroughly investigated the subject from a mechanical and physiological point of view. Mr. Adams was glad to hear Mr. Barwell assert that the spine is incapable of undergoing any amount of lateral curvature without rotation of the bodies of the vertebræ, as this led him to the point he (Mr. Adams) had long endeavoured to insist upon—viz., that rotation of the bodies of the vertebræ always accompanies, and, he believes, precedes lateral deviation of the spine. For the diagnosis of this condition, Mr. Adams relied upon the posterior projection of the angles of the ribs in the dorsal region, and the posterior projection of the

transverse processes in the lumbar region, rather than upon any lateral deviation of the spinous processes. Mr. Adams believed that no lateral curvature, as judged of by these conditions, however slight, could exist without structural changes affecting the intervertebral cartilages and the oblique articular processes—in fact, that these conditions formed the diagnosis between functional and structural deviations, and practically constituted the broad line, on either side of which our treatment would differ. Previous to these structural changes, we might rely upon gymnastics and partial recumbency; and after these changes in the transverse relations of the angles of the ribs in the dorsal region, or the transverse processes in the lumbar region, we must rely upon firm mechanical support with partial recumbency. The result of Mr. Adams' experience had been to convince him that where lateral curvature of the spine existed in any marked degree, and before it amounted to an external deformity, it was essentially an incurable affection by any and every method of treatment. Mr. Adams did not believe that the structural changes which existed in the confirmed lateral curvature admitted of removal, or repair, so as to allow of the affection being cured, unless the case were treated in the earliest stage, and with youth and growth in its favour. It was only in the slightest cases that we could hope to produce a cure. In severe cases of spinal deformity all the profession were agreed in recommending mechanical support as the only system affording relief and comfort to the patient. Sir Astley Cooper and Sir Benjamin Brodie always sent such cases to the instrument makers; but in the treatment of the slighter forms of curvature the greatest difference of opinion had always and still existed. Mr. Adams thought that attention to the diagnostic indications between structural and functional affections upon which he had insisted, would lead to the treatment being determined either in favour of gymnastics or mechanical support; but the curability of any particular case must rest upon the evidence of the existence of structural changes. Mr. Adams believed that further experience would convince Mr. Barwell that the employment of elastic force, such as he now recommended, by means of straps, would be quite useless where actual curvature existed; and that either to arrest the increase of curvature or to produce such improvements as the cases admitted of, it was indispensably necessary to use firm mechanical supports.

Mr. BRODHURST remarked that Mr. Barwell had given no idea of the amount of curvature in the cases he had treated. He wished to ask Mr. Barwell if the curvature was slight or severe, commencing or confirmed. He had himself made many experiments, and had found that when rotation had taken place appliances were useless. He was surprised, too, that Mr. Barwell should have obtained such results from such a bandage. It had been given up in France. He (Mr. Brodhurst) had brought it over from that country in 1851, and had found it fail wherever there was anything like a fixed curve. Mr. Barwell had not told the Society of the nature of his cases, either by description or by photographs; and as he appeared to have made his experiments on healthy and vigorous persons, he might have arrived at the results he had announced. If he were to try his plan on severe cases of curvature, the trials would not justify his conclusions. Sir Benjamin Brodie had tried a similar method in early life, but had given it up, and had acknowledged that recourse must be had to mechanism when rotation had been established.

Mr. NAYLER stated that he should wish to ask Mr. Barwell how he proposed treating certain forms of lateral curvature, whether by the method just described or not; for example, the lateral curvature which is sometimes seen in young children, in whom it has existed from birth. Again, in older patients the septem of two curves is occasionally so abrupt as to constitute an angle rather than a curve, or there may be three curves, and the superior one situated in the neck; and lastly, he wished to ask how he would treat lateral combined with posterior curvature. There is this objection to the employment of muscular exercises as set forth by Mr. Barwell, that we cannot so accurately or nicely regulate them as to prevent their action on the convex as well as the concave part of the curve; and when this takes place the only possible consequence is an increase of the deformity. One essential condition in the treatment of lateral curvature had been completely overlooked by Mr. Barwell—viz., the removal of the superincumbent weight of the head and shoulders by means of the pelvic instrument, provided with a double crutch. Another point is, to have the pressure properly applied to, and constant in its action on, the weaker part of the curve. Mr. Nayler was greatly surprised to hear Mr. Adams say that lateral curvatures are, as a class, incurable. It was only when attended by certain complications, as when the ribs projected posteriorly, that our means were limited to prevent the deformity from becoming more aggravated. In other instances, and especially in early life, a favourable opinion as to recovery might be given.

Mr. BARWELL thanked the president for his kind remarks. It appeared to him strange that Mr. Adams should be disappointed with the amount of novelty in this paper, for the experiments concerning lateral and rotatory movement of the spine during walking, those fixing the amount of normal rotation permitted by the column, the whole plan of treatment by throwing the spine out of its morbid balance on the ligaments, and other points, were new. He was sorry to hear from Mr. Adams that his experience caused him to look upon lateral curvature as utterly incurable; yet the enunciation of that opinion only confirmed Mr. Barwell in his conviction that the mode of treatment at present in vogue was quite inefficacious—a conviction which had led him to make the above experiments and to devise a better method. The results did not lead him to the same sad conclusion as that to which Mr. Adams had come. The author was surprised to hear from Mr. Brodhurst that a belt similar to his own had been made in Paris, because no mention of such could be found in any one of the many French, German, or Italian writers on spinal curvature, and its construction was the result of entirely independent thought; but Mr. Barwell could well believe it must be ineffective if tried alone, for it is not intended to be so used. The oblique bandage is an adjuvant—a very valuable, indeed a necessary, adjuvant to his method of exercising the spinal muscles when thrown by the position he enforces out of their abnormal posture of repose. Finally, Mr. Barwell showed some photographs from severe cases of curvature, dorsal and lumbar, some of which were cured, others in the course of improvement.

Reviews and Notices of Books.

Manual of the Turkish Bath. Heat a Mode of Cure and a Source of Strength for Men and Animals. From writings of Mr. URQUHART. Edited by Sir JOHN FIFE, M.D., F.R.C.S., Senior Surgeon to the Newcastle Infirmary. London: Churchill and Sons. 1865.

THIS is a book which is in every way remarkable. The style, the form, the subject, the statements, are constantly more or less at variance with accepted traditions, and occasionally self-evidently absurd, and yet in many cases we should be sorry to decide on which side the right is to be found. We cannot pretend to analyse a book so full of materials of the most heterogeneous kinds, and of the most various degrees of scientific trustworthiness; but we may fairly give an idea of its contents by running extracts.

The first thing claimed for the bath is the "removal of barrenness;" instances given include "three children at a birth by the bath-mistress at Bristol, and within the week four children at a birth by the bath-mistress at Liverpool. All these children have done well, as have their mothers." Next comes ease in childbirth; the testimony relied on is that of Lady Wortley Montague. Evidence of promotion of an increase in the secretion of milk is afforded from personal observation by Dr. Bramwell, of North Shields. Mr. Toulmin, of Brighton, relates a case in which he alleges that the bath prevented the effusion of ascitic fluid in a case of ovarian dropsy which he had tapped. Mr. Urquhart personally affirms with reference to the bath that "alternations of temperature are ordained for the confectioning of the human frame." He describes a child who only wears clothes for company, who has no more sense of cold than pain. If you ask him if he is cold, he feels himself to find out. "He comes out," adds Mr. Rolland, "of a bath at 170°, and passes from 170° to 22° below freezing point, absolutely naked, without any consciousness of the difference. Large stalactite icicles were hanging from the rocks. I took one of these and rubbed him from head to foot, and pressed it against him. He took it, played with it, and amused himself with it." The child was brought from sickness to robust health, and what is described as comparative insensibility to

pain, by disusing clothing and training him in the bath. We pass over a good deal of curious theory about destroying zymotic action in the blood by external heat, the difference in the effects of radiant heat and transmitted heat, which will not bear analysis, and come to Dr. Leared's paper, extracted from THE LANCET of November and December, 1863, recommending, from the results in quoted cases, the treatment of phthisis by the Turkish bath. Other similar and strange cases are quoted, but they are less accurately observed. "Cancer, Leprosy, Hydrophobia, and Apoplexy" head a section. The case of cancer will not hold water. The case of "leprosy" is interesting and promising; it is, however, probably one of psoriasis. Dr. Buisson is quoted in a communication to the *Abeille Médicale*, in which he declares the bath a certain cure for hydrophobia on the first day of the outbreak. A case of cataract cured without operation is also cited. We can only hope that it is not an example of false diagnosis. Dr. Robertson's case of albuminuria cured by the bath is well known to the profession. We could wish to have the testimony of many more observers in the same direction. This is especially a disease in which the bath promises much in simple forms. Ague, chorea, and "swelling of the joints" are added to the catalogue. Dr. Lockhart Robertson gives interesting and valuable evidence of its efficiency in the treatment of cases of mania and melancholia. Sir John Fife adds important testimony to the utility of the bath in various affections of the heart, lungs, &c., in the Newcastle Infirmary.

It is not our object to criticize this book, but to direct attention to it. It will amply repay the study of practitioners of medicine, and we trust that they will not be deterred by its eccentricities and crudities from investigating more fully the subject of which it treats.

DR. J. RUSSELL REYNOLDS' *Epilepsy: Ihre Symptome, Behandlung und ihre Beziehungen zu andern Chronisch-Convulsiven Krankheiten, unter Mitwirking der Verfassers Deutsch herausgegeben.* Von Dr. HERMANN BEIGEL, &c. Erlangen: Fred. Enke. 1865.

THIS is a translation into the German of Dr. Russell Reynolds' now classical treatise on Epilepsy. This has been recognised as one of the ablest clinical treatises ever published on a disease of Protean variety, and presenting the most puzzling anomalies in its simple and complicated forms. It helped more than anything else, perhaps, to establish Dr. Reynolds as a physician of the most mature judgment, keen analytical observation, and laborious clinical research. The accomplished editor of the forthcoming "System of Medicine" may always look back with satisfaction upon the result of his labours, however much the new "System" may surpass it in importance and extent of circulation. Translation into the languages of the Continent is a compliment to which a man of science cannot be insensible. Dr. Beigel has excellent capacity for such a work. His acquaintance with English technicalities, and his knowledge of our modes of speech and formulæ of prescription, ensure accuracy, and he has fulfilled his self-imposed task with great intelligence and fidelity. Dr. Beigel has added some paragraphs relating to recent subjects which he considers of interest. He reprints entire and interpolates in the text a communication to this journal from Mr. Ernest Hart of a case of progressive optic atrophy following intermittent epileptiform seizures, cured by the application of ice to the cilio-spinal region. Dr. Beigel has rendered, we would fain hope, a service to the medical literature of Germany in occupying himself with such translations from our own; while he pays a tribute to the workers in this country, which, coming from German sources, should be valued the more that we are apt to attribute everything original to German writers—to see magic in the treatises which come to us from that home of science.

MEDICAL HONOURS.—It is stated that Dr. Protheroe Smith will shortly have the honour of knighthood conferred on him.

THE CATTLE PLAGUE AND SMALL-POX.

THE following observations on the points of resemblance between cattle plague and small-pox, by Dr. Chas. Murchison, continuing his series of articles, afford the latest summary of information on the subject.

No. IV.

IN this, as in preceding communications, I shall consider objections to the view that the cattle plague may be a malignant form of small-pox, and shall adduce evidence of an experimental character in favour of that view or in disproof of it.

I. In my Report to the Royal Commission I have described the characters of the cutaneous eruption which I have met with in cattle affected with the plague. As this Report will soon be published, I will not at present enter into details, except in so far as may be necessary to describe the characters of what I have designated "pustules," the existence of which has been denied, but which I have repeatedly found on the hides of cattle dying at certain stages of the plague. These pustules consist of more or less conical or rounded elevations of a thin lamina of cuticle, in many cases with a corresponding depression of the cutis, the intervening space containing an opaque yellow fluid resembling pus. This fluid is not sebaceous matter, but, when examined microscopically, is found to consist of altered epithelium cells, numerous rounded nuclear bodies of the size of pus-corpuscles, and not unfrequently unequivocal *pus-corpuscles* with characteristic nuclei. A few days since, by the permission of Professor Varnell, I examined a portion of the skin of a cow dead of the plague. Mr. Ceely and Dr. Quain had previously seen it, and were satisfied of the pustular character of the eruption. I examined the contents of what we believed to be pustules microscopically, and showed them to Dr. Quain; neither of us had any doubts that they were pus. I submitted the portion of skin to Mr. Campbell de Morgan, who also had no doubt as to the propriety of designating the elevations of the cuticle pustules, or of their containing, with other elements, true pus-corpuscles. Another gentleman, well known as a pathologist, and who for many years has been a lecturer on pathological anatomy, described certain of the bodies found in the opaque yellow fluid from the interior of one of the "pustules" as "model pus-corpuscles."

The reader of Mr. Ceely's admirable Essay on the Cattle Plague will find that he has not only, like myself, described "patches of roseola, pustules, and petechiæ," but papules and vesicles preceding the development of the pustules, and foveolate scars of the cutis subsequent to their disappearance. Mr. Ceely expressly states that his description is founded on personal observation; and, considering his life-long experience in the eruptions of cattle, his statements on this matter cannot be lightly set aside. Writing to me of the specimen already referred to, Mr. Ceely remarks: "I have had many such specimens in this locality and elsewhere."

I have never maintained that the eruption of cattle plague, so far as I have observed it, is identical with that of human variola; but I believe that the differences which exist are not incompatible with the supposition that the cattle plague may be a form of small-pox. Dr. Sanderson has come to a different conclusion. The results of his laborious investigation will no doubt have due weight, and by none will be more highly esteemed than by myself; but, however accurate, they do not, I think, justify him in implying, as he seems to do, that they who differ from him have never carefully examined what they have described, and have contented themselves with "repeating over and over again the worn-out passage of Ramazzini about the 'pustulæ ac tubercula variolarum species referentia' in support of a theoretical speculation."

II. In my former communications I adduced cases which made it probable that an attack of cow-pox either protected from a subsequent attack of rinderpest or modified its course. In Case I., for instance, four out of five cows, belonging to a gentleman in Cornwall, died of the plague; the fifth, which was not even attacked, having suffered three years before from cow-pox, which was communicated to the hands of the milkers. This case has been objected to on the ground that it was highly improbable that one of the cows should have suffered from true cow-pox without its spreading to the other four. I have now ascertained, however, that the owner of the cows did not possess the four cows that recently died at the

time that the fifth one had the cow-pox. Cases III., IV., X., and XIX., and the case referred to last week on the authority of Dr. John Brown, all point in the same direction. On the other hand, Case XIII., originally reported by Mr. Fairmann, and perhaps also Case XVIII. reported in this communication, point rather to the conclusion that cow-pox confers no immunity from subsequent rinderpest. Professor Varnell also informs me that a correspondent had heard, on good authority, of a cow in Wales that was the first in a herd to succumb to rinderpest, and that some time previously had suffered from cow-pox, from which children had been vaccinated. As already stated, there is this difficulty to contend with in both classes of cases—namely, that cows are liable to eruptions on their udders, which are even communicable to the hands of the milkers, but which have not the specific character of true cow-pox. In the preface to the first edition of his work on "Variolæ Vaccinæ," published in 1798, Dr. Jenner wrote as follows:—

"It is necessary to observe that pustulous sores frequently appear spontaneously on the nipples of cows; and instances have occurred, though very rarely, of the hands of the servants employed in milking being affected with sores in consequence, and even of their feeling an indisposition from absorption. These pustules are of a much milder nature than those which arise from that contagion which constitutes the true cow-pox. They are always free from the bluish or livid tint so conspicuous in the pustules in that disease. No erysipelas attends them, nor do they show any phagedenic disposition as in the other case, but quickly terminate in a scab without creating any apparent disorder in the cow. This complaint appears at various seasons of the year, but most commonly in the spring, when the cows are first taken from their winter food and fed with grass. It is very apt to appear also when they are suckling their young. But this disease is not to be considered as similar in any respect to that of which I am treating, as it is incapable of producing any specific effects on the human constitution. However, it is of the greatest consequence to point it out here, lest the want of discrimination should occasion an idea of security from the infection of the small-pox which might prove delusive."

In his "Further Observations on Variolæ Vaccinæ," published in 1799, the exceptions to the fact that "the cow-pox protects the human body from the small-pox," which had been in the meantime brought forward, are explained on the supposition that the cow-pox in these cases was of the spurious kind. "For example," he observes, "a farmer who is not conversant with any of these maladies, but who may have heard of the cow-pox in general terms, may acquaint a neighbouring surgeon that the distemper appears at his farm. The surgeon, eager to make an experiment, takes away matter, inoculates, produces a sore, uneasiness in the axilla, and, perhaps, some affection of the system. This is one way in which a fallacious idea of security, both in the mind of the inoculator and the patient, may arise; for a disease may thus have been propagated from a simple eruption only.....All cavilling, therefore, on the mere report of those who *tell us* they have had this distemper, and are afterwards found to be susceptible of the small-pox, should be suspended."

These remarks, by one so conversant with the eruptions of cattle as Jenner, are as applicable in the present discussion as in that which agitated public opinion at the end of last century. The caution is no doubt as necessary in cases where previous cow-pox has been thought to protect from rinderpest, as in those where it has appeared to have no such power. But making every allowance for the fallacy now referred to, the fact remains that, in certain remarkable instances, the only cattle in a herd that have escaped the rinderpest, or had the disease in a mild form, are those that have previously suffered from a malady believed to be cow-pox; and that, so far as we know, the only eruptive disease in cattle likely to produce a specific change in the constitution, and yet unattended by marked constitutional symptoms, is the true cow-pox.

III. If nothing else result from the experimental inquiry now being conducted, one thing seems certain, that retro-vaccination is a much easier matter than was formerly imagined. Till within the last few weeks, it was generally believed that, although it was perfectly possible to vaccinate a cow with lymph from a child's arm, a successful result was rarely attained. But now there can be little doubt that, with proper care, a successful result is almost equally certain in the cow as in the child. In addition to the evidence on this point furnished in my last communication, it may be mentioned that of nearly twenty cows operated on by Mr. Fletcher, of Bromsgrove, two or three weeks ago, a successful result was obtained in all. A drawing of one of the cows, sent to me by Mr. Fletcher, shows three characteristic pocks. Dr. Harding, of Whittlesey, and Mr. Muscroft, surgeon, of Pontefract, both write that they have succeeded with lymph from the child in obtaining large well-developed vesicles with a central depression. Mr. Leverton, surgeon, of Truro, also writes that, out of seventeen cattle vaccinated by him, "eight have taken splendidly. The vesicles were as perfect (only larger) as those in a fine strong child, and full of clear limpid lymph." Lastly, a few days since, I saw, with Mr. Edward Tyler of Marylebone, three cows in a London dairy which he had vaccinated a week before with lymph from a child. There were characteristic vaccine pocks in all; and from one vesicle in one of the cows we vaccinated eight other cows, and filled three large tubes with limpid lymph.

IV. Lastly, it remains to be considered what evidence another week has furnished as to the power of vaccination in preventing or modifying an attack of rinderpest. I regret to state that the evidence in its favour is, on the whole, less satisfactory than when I last wrote. The medical men who have had the largest experience of it during the last four weeks, in the midst of the most infected districts, continue to write strongly in its favour. Many cases similar to those reported last week have been communicated to me, where the remarkable exemption from the disease exhibited by vaccinated cattle seemed to be hardly explicable on the supposition of a mere coincidence. Several such cases are appended to this paper.

Dr. Bellyse's four cows (Case V.), vaccinated successfully on Jan. 1st, remain well to this date (Jan. 23rd). It will be remembered that a fifth cow belonging to him, in which the vaccination entirely failed to take effect, was seized with rinderpest on Jan. 10th, and died in two days.

The herds belonging to Mr. Hornby and Mr. Broughton, referred to in Case IX., also remain well.

The cow ill of rinderpest which on Jan. 13th was placed in the same shed with four others that had been vaccinated (see Case XII.) died on Jan. 18th. Another diseased cow was immediately substituted for it, and died on Jan. 21st. On Jan. 24th, two of the vaccinated cows were still perfectly well; the other two seemed slightly out of sorts, but did not refuse their food.

On the other hand, Mr. Tollemache's vaccinated calf, which was subjected to the severe test detailed last week (Case XI.), being shut up for five days and nights with four calves that died in succession of rinderpest, in a box nine feet square, with all the chinks and holes crammed with straw, was seized with rinderpest on Jan. 17th, the seventh day from the commencement of the exposure. According to the latest report, dated Jan. 24th, or the seventh day of the disease, the animal was better, and great hopes were entertained of its recovery; if it recovers, this circumstance must be viewed in connexion with the fact that Mr. Tollemache's cows, which were attacked with rinderpest prior to vaccination, all died.

One of Mr. Tollemache's vaccinated cows was also seized with rinderpest on the morning of January 20th, and is still (Jan. 24th) ill, though according to the latest accounts it was better, and the disease appeared to be comparatively mild. It will be remembered (see Case II.) that Mr. Tollemache had six cows attacked with rinderpest, all of which died; and that of the remainder, six were vaccinated on Dec. 16th, and four on Dec. 28th. There can be little doubt that the vaccination was successful in all these cows, although I believe that they, as well as the calf, were vaccinated in only one point.

In Case VI., it was stated that on Jan. 1st and 6th twenty-nine cows belonging to Mr. Dutton of Hatherton were vaccinated by Mr. Mathews of Nantwich. Several calves on the same farm were ill at the time with rinderpest, and many of them have since died. In twenty-three of the cows the vaccination was successful; in six it was not. Three of the six unsuccessful cases were soon seized with rinderpest, and two are dead. One of the vaccinated cows has also been seized within the last few days, and is still ill.

Mr. Mathews has also informed me of a cow that has died of rinderpest after what he believed to be successful vaccination.

From Case XXI., also, it will be seen that several cows believed to have been successfully vaccinated have since contracted rinderpest.

Almost all of my correspondents, however, state that the disease in the vaccinated cattle is comparatively mild.

I have likewise heard that Mr. Reddrop, in the neighbourhood of Nantwich, has lately lost twenty-two out of forty cattle. The disease commenced about Christmas-day, and about the 8th of January the herd was vaccinated. I have no

details as to whether the vaccination was successful in any of the cases, or in what proportion. The fact mentioned by Dr. Bellyse (see Case XVII.) of vaccination failing to take effect in an entire herd, which have since sickened of rinderpest, although the same lymph succeeded in three cows belonging to another stock, is sufficiently remarkable.

I have not heard from Mr. Mathews, of Nantwich, as to the further progress of Cases VI., VII., and XII., reported in my last communication.

Whether the failures in the protective power of vaccination now reported be owing to the animals having been operated on in too small a number of points remains to be seen. In the human subject, it is well known that the liability to, and the mortality of, small-pox vary according to the number of good vaccination marks, and that the most competent authorities consider six marks necessary for imparting the most complete protection. Most vaccinators of cattle have satisfied themselves with vaccinating in one or two places, and I have even known one ivory point used for four cattle.

It is well known that vaccination has no power over the small-pox of sheep. The experiments of Mr. Marson and Professor Simonds, conducted on a most extensive scale, show that both vaccination and variolation of sheep, even when successful, in no way diminish the liability to or the mortality of ovine variola; and also that a second action of the vaccine virus is fully equal to the first, by which it appears to be in no way influenced.* Similar results have been obtained by French experimenters. It is obvious, therefore, that the vaccine virus has no special action upon the organisms of sheep, as after successful vaccination they are still open to the influence of the vaccine virus, as well as to that of their own particular form of variola.

A different result ought certainly to be expected in the case of cows which have suffered from their own vaccine disease. There are some grounds, however, for doubting whether an attack of ordinary cow-pox confers an equal immunity from a subsequent attack of cow-pox in the cow as in man. Many intelligent correspondents have stated to me that cows are liable to several attacks of cow-pox in the course of their lives; and although there is always the possibility of the spurious having been mistaken for the true pox, it may be mentioned that these second attacks of cow-pox in the cow are alluded to by Jenner, although he states that he had been informed that they were generally slight. This is a matter, however, which can easily be decided by experiment.

The evidence, so far as it goes, certainly shows that vaccination confers a certain amount of protection from rinderpest; but whether this protection be of a specific and permanent character, longer time is required to decide.

In connexion with the subject, I may mention that two most important experiments were commenced on Saturday last (20th inst.) by Professor Varnell, at the Royal Veterinary College. Of two cows successfully vaccinated by Mr. Acton, and in one of which three good pocks were the result, one was inoculated with rinderpest, and the other was placed in a loose box, in company with a calf which was ill of rinderpest, and which died within twenty-four hours. On Jan. 24th both were still well.

I would also call attention to Case XX., where the details are given of the commencement of an experiment to ascertain whether cattle, which have recovered from rinderpest, are equally liable to cow-pox as those which have not had the plague.

CASE XIV.

On January 9th Mr. Henry Muscroft, surgeon, of Pontefract, vaccinated ten young heifers for Mr. Hirst, of Kellington, near Pontefract. During the last two or three weeks rinderpest has attacked 206 cattle in seven small farms, all within two or three hundred yards of Mr. Hirst's, and has already proved fatal to 184. In one of the ten vaccinated cattle the operation was not successful; and on Jan. 20th this animal was attacked with rinderpest, and is still ill. In a second, where the vaccination appeared to take, symptoms of rinderpest set in on Jan. 14th, or the sixth day after vaccination, and the animal died on the morning of Jan. 21st. In the remaining eight cows vaccination was followed by "a large pock, with raised edges, and depressed centre." The number of points is not stated, but the eight cows are still well (Jan. 22nd). Their further progress will be reported on a future occasion.

CASE XV.

Mr. Muscroft also informs me that Mr. John Peskitt, of Beal, near Pontefract, had lately in his possession forty-seven head of cattle. On Jan. 23rd forty-two had died of rinderpest, two were dying, one had recovered, and another was still ill. The only cow that remained well was one that had been successfully vaccinated a fortnight before. One other cow was vaccinated at the same time, but the result was not satisfactory.

CASE XVI.

The particulars of this case have been communicated to me by Dr. C. F. Harding, of Whittlesey. In a herd of thirty cattle belonging to Mr. D. Ground, of Elderwell, near Whittlesey, twenty have been attacked during the last few weeks with rinderpest. Three are now (Jan. 22nd) recovering, one is still very ill, eight or ten have died, and the rest have been killed. The ten that remain were vaccinated in both ears on the 2nd of January with lymph from a child. The operation was performed by Dr. Harding. In nine of the ten cases well developed vesicles with a central depression resulted. One o the vaccinated cattle has since suffered from slight febrile symptoms, which some believed to be rinderpest, but all are now (Jan. 22nd) perfectly well.

CASE XVII.

On Monday, Jan 15th, Dr. Bellyse vaccinated twenty-seven milch cows, heifers, and young bullocks, belonging to Mr. Coupland, of Worteston. Two days before, one animal in this herd had died of rinderpest, and another was very ill when the twenty-seven were vaccinated. On Jan. 21st not one of the twenty-seven cows showed any sign of successful vaccination, and in the meantime three of them had died of rinderpest, and others were very ill. Yet with the same lymph, and within half an hour of the same time, three cows in other herds were vaccinated, "all of which have taken in every point."

CASE XVIII.

Mr. William Walker, a farmer, in the neighbourhood of Falkirk, N.B., has communicated to me the particulars of a herd of twenty cattle, which have hitherto remained exempt from rinderpest, though this has been prevailing for some time in the immediate vicinity. This exemption he is inclined to attribute to their having had cow-pox last summer, which produced pustules on the hands of the milkers similar to those seen after ordinary vaccination. At the same time he gives the details of another cow on an adjoining farm, which was also believed to have suffered from cow-pox last summer, (the teats were very sore, but the milker's hands were not affected,) but which has lately died of rinderpest.

CASE XIX.

Mr. Baker Brown writes to tell me that he has three cows in Buckinghamshire which have hitherto entirely escaped the rinderpest, although this disease has been prevailing in many adjoining farms, and although his cows have been in the habit of travelling twice daily on a public road along which cattle have passed almost daily to market. He attributes their exemption to their having suffered from cow-pox last summer.

CASE XX.

On the 21st of January, I assisted Mr. Edward Tyler, of Marylebone, in vaccinating eight cows in a London dairy, four of which had recovered from severe attacks of rinderpest during last autumn, and the other four never had the disease. The lymph for all was taken from the same vesicle in a cow on the eighth day after vaccination.

CASE XXI.

Of thirty-six cattle belonging to Mr. Tollemache's bailiff, twenty-six were vaccinated on January 3rd, all of which "took" but two. One of these two was attacked with rinderpest on Jan. 12th, and died on the 16th. The remaining ten cows were vaccinated on Jan. 10th: seven of the ten took; the remaining three were revaccinated on Jan. 18th. Three of the cows supposed to be successfully vaccinated on Jan. 3rd have since been seized with rinderpest—one on the 19th, a second on the 23rd, and a third on the 24th. They are still alive, but the first of the three is very ill. The bailiff was his own vaccinator.

CASE XXII.

On Jan. 5th forty-six cows were vaccinated by Mr. Mathews, of Nantwich, for Mr. William Perrin, of Westaston. The operation was successful in all but three. One of the three in which the operation was unsuccessful has since contracted rinderpest, but is recovering; the two others have been revaccinated, and this time the operation promises to be successful. The forty-three remaining cows were all well on Jan. 24th.

* Official Report of Experiments as to the Vaccination of Sheep. 1864.

THE LANCET.

LONDON: SATURDAY, JANUARY 27, 1866.

SOME members of our profession seem very anxious to satisfy themselves and other people that disease is a very fine thing that should be left entirely to itself. They are so solicitous to justify what they consider "the ways of GOD to man," to see good, and nothing but good, in everything, as to have almost brought themselves to believe that "medicine" is an impertinent interference with Nature, and the office of a physician that of an amateur student of disease, who shall just drop a kindly hint now and again as to the nature of the process he studies, but by no means interfere with it or seek to alter it. As to the abstract place of disease in the designs of the Creator much has been said which we cannot now consider. That disease is not a pure evil, that in the worst diseased processes there is a physiological method, and a nisus after a better state of things, and that no medical measures are wise which do not take into consideration this physiological method and this nisus, and which do not endeavour to turn them to account in the treatment, we readily admit. We willingly concede the merit due to those numerous physicians who of late have insisted on the importance of considering the natural course and tendency of disease, and of taking Nature into consultation and co-operation in the treatment of it. We admit all this, and yet we maintain that disease left to itself is apt to prove a very wayward thing, and we are quite sure that all the ingenuity of speculative and unpractical physicians will not satisfy mankind that "medicine" is not one of the most urgently needed and one of the most beneficial of the sciences.

We have been led to this subject by reading the address of Dr. BENJAMIN E. COTTING at the annual meeting of the Massachusetts Medical Society; the subject of the address being, "Disease a part of the Plan of Creation." The principal objects of Dr. COTTING seem to have been, the refutation of the notion that disease is to be regarded as a punishment of sin, and the establishment of the view that it is rather to be regarded as "a part of the plan of creation—one of the myriad expressions of divine thought." His doctrine leads, he says, to a new view of "the purposes of diseases themselves. It shows the idea untenable that disease is an evil only to be expelled from the system by some antagonistic power—the *vis medicatrix* for example; or by a new and incompatible disease artificially induced; or that it is in itself an effort (*conamen*) to expel from the body an enemy already in possession; but that it is one of the attendants of life instituted in the beginning. ..... Health and disease are parts of one great plan, and often intricately involved in each other." Dr. COTTING bases his doctrine on the fact that geological evidence exists that extinct animals injured and ate each other, which he takes for a proof that there were contusions, fractures, and bad dyspepsias among them, which, in the absence of arnica and splints and pepsine, did better than may be supposed. He also reminds us of the lethific action of physical causes on the animals in those early times, and seems to think it proved that heat and cold and suffocation, storms, natural poisons, and the like, produced their necessary effect in all time. As with animals, so with plants. As with wild animals, so with tame ones; as with extinct, so with existing ones. And as with animals, so with man. Dr. COTTING does not tell us that ADAM had cold or rheumatic fever, but his argument would lead us to think that the first man did not escape some experience of disease even prior to that

> "first disobedience and the fruit
> Of that forbidden tree, whose mortal taste
> Brought death into the world and all our woe."

For he tells us that "every organ has its peculiar diseases. No forecast or wisdom of the individual can with absolute certainty ward off or delay attacks. No disease has as yet been removed from off the globe. When an epidemic appears it completely confounds all our conceptions of hygienic laws, as well as our preconceived notions of its nature or proper treatment." Then Dr. COTTING goes for further support of his argument into a consideration of the laws of disease—the fact that especially epidemic disease has certain stateable and very defined peculiarities, such as a period of incubation, a period of eruption, and a period of decline, with a tendency to sundry sequelæ. Acute rheumatism is just as much a mystery to the doctor as scarlatina. "Each new case is a new enigma." So that whether a disease runs a definite course which can be described beforehand, or a somewhat irregular one, Dr. COTTING gets support from it for his view that GOD made disease as he made health; and his address would almost suggest that the production of the morbific poisons was as much a special act of the Creator as the production of light, air, or electricity.

It is not easy to see the practicability or profit of an inquiry of this kind. As none of us were present to see the distinct creations of the Almighty, we can only very unsafely speculate thereupon. But as we have enough to do to keep the peace between Genesis and Science already, it seems a pity to make this extra demand upon us, and in effect ask us to believe, what Genesis never hints, that the morbid poisons and all morbid processes were specifically designed in the plan of the Creation. Nor is it easy to understand why a physician should take pleasure in straining morbid phenomena so as to come to admire them so much as scarcely to be able to make up his mind to interfere with them. For it is evident that a man who believes that disease is a special institution of the Almighty is not likely to take much pains to cure it. Dr. COTTING tells us, accordingly, that in the epidemics of 1847–48 he took care of over three hundred cases of typhus fever without administering drugs; of these thirty-one died. Of eighty-one cases of scarlatina so treated, four died. He tells us, too, that sometimes he treats rheumatism without drugs.

These facts make an interesting contribution to our knowledge of the natural tendencies of disease; and we should not oppose an experiment made on a larger scale by leaving disease entirely to itself, giving the patient only food enough to live and cope with the disease. We firmly believe that the amount of suffering and of mortality would both be greater than under a judicious use of medicine and medical appliances. There is nothing in Dr. COTTING'S facts of which physicians who believe in the advantage of a judicious interference with disease need be afraid. Dr. COTTING lost 1 in 10 of his fever cases. Dr. CHAMBERS has published a set of 121

cases treated by the administration of dilute acids and simple nourishing food, with a loss of only 3 cases, or 1 in 40.

We have only time to say two or three things in answer to Dr. COTTING. In the first place, it seems to us that he strains facts in favour of his fancies and against the power of his art. He exaggerates our ignorance of epidemics, and our inability to predict their effects. It is true we may not have removed one disease from the globe; but we have removed several diseases more or less entirely from portions of it, and what has been done for portions may be done for the whole. Small-pox is almost unknown in some communities, and ague has been removed from the list of diseases of large districts; and where ague occurs it is curable by medicine. It is not correct to speak as if we were entirely without data to guide us in judging of the course and fatality of epidemics. The knowledge we have of contagion, of the unmistakable effects of physical condition and circumstance in influencing the fatality of undoubtedly contagious diseases, are facts which would have found a place in a less fanciful and less one-sided address than Dr. COTTING'S.

At any rate we must ask Dr. COTTING to concede that if GOD has made diseases, he is also the maker of physicians, and of medicines which physicians have proved, to their own satisfaction and that of all past generations of men, to have a beneficial and curative effect in disease. We quite agree with him in thinking medicines only a very small part of our resources, but it should not be the part of any physician to disparage them. That opium relieves pain and gives sweet sleep; that quinine cures ague; that chlorate of potash has good effect on sore states of the mouth and throat; that iodide of potassium relieves nocturnal pains and syphilitic eruptions; and that vegetable acids cure scurvy,—are facts much more certain than that disease was a distinct creation of the Almighty, and are the kind of facts on which physicians should dwell. Instead of this, Dr. COTTING talks as if all medicines were useless. He makes a prominent physician speak of prescribing medicine thus: "I had not time to persuade the family that the patient did not need any medicine, so wrote a prescription and departed." He must be either an incompetent physician or an inexperienced one who does not see daily the most marked effects on disease from the administration of suitable remedies—who has not seen medicines as distinctly conduce to the removal of a rheumatic fever or a bronchitis or a devitalizing pain, as the suture or the splint of the surgeon is seen to conduce to the neat and timely cure of a wound or a fracture.

Dr. COTTING goes too far. He goes beyond the idea that disease is not all evil. He would have us think that it is all good. Most of us will continue to think that it is a very mixed good; that a rheumatic fever had better be shortened, that pain had better be relieved, and that for these ends medicines are most important and indispensable. We congratulate the Massachusetts Society upon having by anticipation protected itself from the charge of necessarily sharing Dr. COTTING'S views by resolving, as it did in 1860, "that it does not consider itself as having endorsed or censured the opinions in former published annual discourses, nor will it hold itself responsible for any opinions or sentiments advanced in future discourses."

MONS. A. LEGOYT, the head of the General Statistical Department of France and secretary of the Statistical Society of Paris, has recently drawn to a conclusion some researches relative to "Accidents in Europe and the United States," a *résumé* of which can scarcely fail to be of interest to the medical profession of so important a unit of Europe as is Great Britain. We purpose therefore to lay before our readers the more important inferences which may be deduced from M. LEGOYT'S labours.

The first questions that arise in connexion with the topic with which the French statistician has busied himself are—1st, the ratio of accidents to the population; 2nd, their ratio to the general mortality of each sex; and 3rd, their ratio as regards the female population, the male standard being taken at 100,—in the different countries which enter into the comparison here made. The following table will afford at a glance an answer to these inquiries:—

Country.	Periods and Years.	Ratio of Fatal Accidents to 1,000,000 of the Population.	Ratio of Fatal Accidents to 100 Deaths.			Ratio of Accidents to Women = 100 in Men.
			Males.	Females.	Both Sexes.	
France	1856–1860	407	2·20	0·60	1·50	23
Germany:						
Baden (Grand Duchy) ...	1855–1862	343	...	...	1·22	...
Bavaria	1857–1861	236	1·20	0·40	0·81	32
Hanover	1852–1857	396	2·67	0·72	1·70	26
Mecklenburg-Schwerin ...	1861	371	...	...	1·90	...
Oldenburg	1861	502	3·47	0·82	2·18	22
Prussia	1851–1860	407	2·20	0·69	1·47	29
Saxony (Kingdom) ...	1852–1858	298	1·30	0·36	0·84	25
England	1858–1861	682	2·76	1·03	1·91	36
Austria	1859	258	1·32	0·50	0·92	36
Belgium	1840–1849	208	...	...	0·87	...
Spain	1860	202	...	...	0·74	25
Russia	1844–1851	201	...	...	0·54	24
Scandinavia:						
Denmark	1851–1854	232	...	...	1·73	...
Norway	1851–1855	679	...	...	4·02	...
Sweden	1856–1860	479	2·37	0·90	2·15	...
Switzerland	1852–1860	332	...	...	1·32	...
United States	1860	575	6·02	3·05	4·62	46

From some of the numbers given above we find that the proportion of fatal accidents to the population varies between the maxima of 682, 679, and 575 to a million of inhabitants in England, Norway, and the United States, and the co-efficient

minima of 201, 202, and 232 of Russia, Spain, and Denmark. It is evident from such variable proportions that the determining causes of fatal accidents must be of very complex nature, and cannot be explained simply by what may be called the economic character of different countries. In fact, if the predominance of manufacturing and mining industry justifies the exceptional rate of fatal accidents in England, and to a certain extent in the United States, it surely cannot do so as regards Norway, the Duchy of Oldenburg, and Sweden. On the other hand, we should miss with surprise Belgium and Saxony, two of the chief industrial States of Europe, from amongst the countries with a high rate of mortality from fatal accidents, if a great development of manufacturing industry were the chief cause of such mortality. We must, therefore, fall back upon the existence of special local causes dependent on the manners, customs, and configuration of the country, perils of navigation, fishing, and modes of transport, neglect of children or actual exposure of them to dangers of various kinds, &c.

There would not appear to be any absolute relation between the ratio of deaths from accidents and the population, and between such ratio and the total number of deaths. Herein exist two classes of facts, indeed, essentially distinct from each other. A relatively large number of accidents need have but a slight influence in the production of the causes of general mortality. The proportion of such accidents amongst women to 100 amongst men, oscillates between *one-fourth* and *one-third*. It would appear to be quite exceptional in the United States (46 per 100), where the females take a very active part in the excitable duties falling upon the heads of families in so feverish an existence as is that in America. In our own country the proportion is relatively high; and here a great number of female hands participate in the production of our industry. M. LEGOYT has been able to compare only a small number of countries, when the immediate causes or nature of accidents are considered. In illustration of the results obtained so far, however, the following table may be usefully referred to.

—	England.	Belgium.	Denmark.	Spain.	United States.	France.	Norway.	Russia.	Sweden.	Switzerland.
Submersion	170	403	603	243	173	377	745	529	537	402
Burns	238	...	16	28	237	...	40	64	49	42
Falls	...	64	...	110	73	129	47	106	...	148
Crushing and bruising	419	303	...	...	43	202	58	98	...	178
Congelation	...	...	...	137	8	...	27	68	30	29
Poison	20	3	...	4	52	...	2	3	5	13
Lightning	9	...	7	9	9	...	8	...	7	1
Firearms	5	3	...	29	40	81	11	...	217	...
Sharp or cutting instruments	...	...	...	...	...	...	3	...		...
Asphyxia	77	56	...	24	134	91	9	22	108	...
Inanition, exhaustion, &c.	...	19	...	23	...	15	...	...	1	...
Alcoholism	...	10	...	5	...	25	4	55	34	...
Other causes	62	139	374	388	231	80	46	55	12	187
Total	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

With the exception of England, where contusions and injuries (classified under "crushing and bruising"), and of the United States, where burns and scalds, occupy the first place amongst accidents, "submersion" is the cause of the greatest number of deaths. Next come falls from an elevation; then burns, crushings, and asphyxia. Amongst the Scandinavian countries the large number of "congelations" is not to be wondered at; but there must evidently be some error as regards Spain in this particular. So also, whilst we are not surprised to find that "alcoholic excesses" play an important part in Russia and Sweden, we are struck by their insignificance in England, Denmark, and the United States; some fallacy we suspect likewise lurks here. It is with respect to "burns" that the ratio of fatal accidents rises higher amongst women than amongst men.

M. LEGOYT's researches tend to show that accidental deaths nearly everywhere increase more rapidly than does the population. In France, for example, the following successive and increasing ratio has taken place: 15 fatal accidents to 100,000 inhabitants from 1827 to 1830; 16 ditto ditto from 1831 to 1835; 19 ditto from 1836 to 1840; 22 ditto from 1841 to 1845; 24 ditto from 1846 to 1850; 25 ditto from 1851 to 1855; and 28 ditto from 1856 to 1860. No doubt some of this increase is due to the more exact character of recent enumerations; still, the continuously progressive rate which is here seen indicates a sure though lamentable onward movement.

Children appear to constitute a high proportion of the victims of fatal accidents. In Bavaria the latter form a very large part of the causes of the mortality of childhood and adolescence, from birth to twenty years of age, and within this range the maximum is attained between the time of birth and five years. Submersion is the more frequent cause—particularly as regards male children—of the fatal event. Burns and poisoning are frequent in tender years; but, strangely enough, children are less frequently victims in towns than in country districts.

The ratio of females to males as regards accidents tends to increase, probably with the participation of the former in industrial occupations. In Bavaria and in Saxony the ratio is highest during early infancy, and in the former State lowest between forty and fifty years of age. At every age it attains its maximum through "burns," which in Bavaria are more common during summer than in winter. Women more frequently succumb to burns, suffocation by fire, submersion, and poisoning.

Fatal accidents are of much more frequent occurrence in summer than during the other three seasons of the year. This is due, probably, to the fact of the former season being the chief one for out-door operations, navigation, &c. It is a fair presumption, also, that the smaller number met with in towns as compared with country districts is due to the greater vigilance of authority, and the more exact surveillance of

parents, generally put in force in towns. London, Berlin, and Stockholm illustrate this conclusion very notably. From 1852 to 1854 Paris likewise was in the same category; but from 1855 to 1861 it occupied the opposite position.

Whilst upon this subject, we may remark that in a communication from Pico Mulera, Italy, dated January 4th, Mr. H. HOSKINGS informs the public that the mortality amongst the workmen employed in the Mont Cenis tunnel is so great, from powder-smoke and bad ventilation, that they have refused to work any more. The undertaking is consequently for the present at a standstill.

Medical Annotations.

"Ne quid nimis."

"EXCEEDINGLY CLEAN, AND NO COMPLAINTS."

THE report of our Commissioners on the Bethnal Green infirmary appears at a moment which is not inopportune. Their first visit was made some little time since; their second, while the inquiry was in progress as to the circumstances under which two sudden deaths had occurred in the receiving wards. The moral of that inquiry was hardly, as it seems to us, sufficiently appreciated by some who have commented on it. Among the facts elicited were these. The dead man Sedly was admitted at seven in the evening. He was seen to be "a little ill," but it was thought "not enough to be reported." Being over sixty years of age, he was entitled to tea and bread-and-butter, but he got only bread and gruel. In the night he died, under circumstances of aggravated neglect. On the previous night the porter *had* reported three persons in the receiving ward as sick, but the report was disregarded till next morning. It was shown incidentally that the bath was heated according to the porter's fancy, and tested by his horny hand; and it was stated also that a man's life had been destroyed in this house by his being put into a hot bath. The officials intimated that here, as in the bath at Lambeth undergone by the "casual" visitor from the *Pall-mall Gazette*, successive incomers were washed in the same water (although the pipes were here not "out of order")—an admirable device for spreading contagious fevers. Another official testified "that he had sometimes dressed persons entering the house in the clothes of persons leaving the sick wards; not very often—perhaps not more than once a quarter." At the close of this edifying inquiry, one of the guardians rose and said that "the evidence taken that day would show the excellent manner in which Bethnal Green Workhouse was conducted, and how baseless was everything said in the papers to the contrary." Such a remark upon disclosures like these is perhaps the most striking illustration which could be given of the manner in which the guardians understand their duty to the sick poor, and the spirit in which they perform it.

But we must turn from this example of the arrangements for receiving the sick poor to their treatment when permanently installed in the infirmary. And here we feel bound to quote the following paragraph, in order to show precisely what is the value of official inspection as at present carried out. In the report of *The Times* it is announced that, after the proceedings had terminated, "the Commissioner passed through the portion of the house he did not visit the previous day. All the wards were found to be exceedingly clean, and the arrangements for ventilating the house are such that there is no stint to the fresh air admitted. The beds were all rolled neatly up in military fashion, and the Commissioner found no complaints whatever among the inmates, who were mainly old and epileptic."

Now what are the facts disclosed by *our* Commissioners, who "passed through the house" the same day? They found precisely that aspect of cleanliness which deludes the official inspector: boards and tables scrubbed in true man-of-war fashion; walls whitewashed; and beds folded up in military style, with a uniform regularity which delights the eye. But what of real cleanliness and fresh air? what of true organization and efficiency? They found but one watercloset attached to the whole range of female wards; and in their place arrangements of the most indescribably filthy character. Upstairs they found a single closet with three seats, used by some sixty-five persons, inside a ward, open at the top, and the partition not reaching the ceiling; they were very foul-smelling; and in the ward lay three helpless paralytic and bedridden persons. The whole arrangement is cruel and disgusting in the extreme. The wards are described as universally overcrowded. The admitted allowance proper for sick wards is 1200 cubic feet: these unfortunate creatures have to be contented with 300. As to personal cleanliness, there is a want of baths throughout the sick wards, and the lavatories are very deficient and all of them bad. The children in one ward were washed in a pail, and the nurse admitted that she washed a number of them in one water and dried them on the sheets. The ventilation is also condemned. There are no day-rooms; and many of the sick wards are occupied by "day boarders," who take their meals there, as well as by the sick who sleep in the closely-packed beds. Some of these wards are so narrow that it is necessary to sidle along between the table in the middle and the beds on each side in order to pass through them. So much for the cleanliness and ventilation, which are depicted in such pleasing colours. As to the true efficiency of this great hospital—it is such, for it contains nearly 600 sick,—let it be noted that it has no resident medical officer, no resident dispenser, nor any dispensary; that there is no system of night-nursing; that the male lunatics were found in a dark little ward with no outlook, utterly miserable, and overlooked by a weaver out of work; that there is one medical officer attached, who has the charge of all this sickness and misery, who, with his partner, devotes two or three hours a day to the total care of these hundreds of sick people.

The Bethnal Green infirmary is, like others which have been described in our pages, a scandal to the nation. The official inspection under which these abuses flourish, and by which they are covered over, is a tragical sham. No one person could possibly, even by the entire devotion of his time, efficiently inspect the great system of infirmaries which make the workhouses the real State hospitals of the country. It is perfectly evident that lay inspection is incompetent to discover even the grossest defects of hospital administration; and we can but hope that the lesson derivable from this contrast of opinions and facts will not be lost upon those who wish to inaugurate a really efficient and humane treatment of the sick poor in the infirmaries of London workhouses.

MEDICAL EDUCATION IN FRANCE AND ENGLAND.

THE propriety of instituting changes in the system of medical education is under discussion in France. By some persons the separation of the examining from the teaching body is urged. The little attention paid to the lectures of the professors of the Faculty, and the eagerness with which students follow the courses given at the Ecole Pratique, are much insisted on. Many arguments of less relevancy are urged. We shall shortly recur to the arguments as authoritatively stated; but, meantime, it is interesting to notice that even in France, where that terrible abuse of lectures, which is the bane of our English system, is of far less proportion than here, the preference for practical teaching is avowed. Here the students are lectured to death, and taught very little. The lecture-room is frequently a chamber of torture; comparatively rarely a place of instruction. As

examinations become more stringent, the number of pupils plucked becomes greater. The most efficient examination here is that of the University of London. It is by no means above that of the University of Paris. Yet only the *élite* of our students venture to encounter it; and of them a very large proportion indeed are plucked. The reason must be sought in the absurd system which requires only "attendance at lectures," which makes no provision for frequent examinations, and which encourages the least efficient plan of teaching—that by professors who read addresses of an hour long. No other science is taught in the same manner; and when, lately, the Archbishop of York—one of the most experienced of university teachers—examined our system of medical education in the address which he delivered at St. Mary's Hospital Medical School, he unhesitatingly pronounced a condemnation of this part of it, which we heartily hope will yet produce its effect. The recent circular of the Senate of the University of London points to precisely similar conclusions. Students listen to words, and acquire a knowledge of words; but they are not led to examine the objects and to perform the experiments of science: and so they can write botanical and zoological and physiological treatises, but cannot dissect a flower or recognise common types of bones, and have a purely book knowledge of their subjects. It is only by tutorial and demonstrative teaching that a useful knowledge of science can be conveyed. The improvement in clinical teaching is the one good feature of our schools: they have yet to make great changes in order to bring their educational system up to a high practical standard.

FEVER NESTS AND PARISH AUTHORITIES.

RECENT inquests held by Dr. Lankester illustrate very well the present causes of that endemic residence of fever in London which fills the Fever Hospital, invades the wards of all the metropolitan infirmaries and hospitals, and swells our death-rate, while it adds to an extent which can hardly be estimated to the destitution which calls for heavy poor-rates. That waste of life is another form of expressing waste of money, is a proposition, perhaps, hardly so familiar as it should be to the minds of London vestrymen, otherwise they would not reject so scornfully the proposition of the health officers for local sanitary improvements. At an inquest in Russell-place it was shown that the house in which deceased died was most wretched; the smell was enough to poison any one. There were dust-holes in the yard, overrunning with refuse and decayed vegetable matter. There was no door to the closet, which had overflowed. The stairs were decaying and most of the upright supports to the baluster had fallen away, and every step was broken in. The mother of the deceased corroborated the above statement, and added that all the windows in her room were broken. Another poor woman, who, with five children, occupied a room in the same house, had a similar story to tell: they had complained to the landlord, who told them to go if they could find better; but they could not. The jury returned a verdict that "the death was accelerated by the want of sanitary arrangements in the house in which the deceased died, and would call the attention of the parish authorities to the filthy state of the said house, in order that measures be immediately taken to render it fit for human habitation." Two jurors who had similar property objected. A like series of circumstances were disclosed in Lisson-grove. Now, let us ask, what hope is there really that the vestries, as at present constituted, will do their duty in this matter? We all look to the vestries. They are the "local authorities;" and for long time we have clung to the "English idea" of local self-government. But will the sort of men who constitute the majority of vestries understand what is required at their hands in the future better than they have in the past? We can see little reason for such a hope. The latest example of what a vestry thinks and how it will act is painfully suggestive. Dr. Hillier, of St. Pancras, has made a formal report to his Board of sanitary defects in the parish, and appended a series of recommendations for their amendment. The recorded discussion is entitled to a place in contemporary history. It shows the vestryman in the full height of his dignity and the full swing of his oratory. It was roundly asserted that the medical officers of the metropolis were only anxious to bring the vestries into contempt, and, "with the *wretch of a coroner* at their head, they sought by all means in their power to bring ridicule on the various vestries, by asserting they were careless as to the public health." A great orator protested "against medical officers of health meeting in conclave and concocting sensational reports as to the unfavourable state of public health in London. He had noticed in the returns of the Registrar-General, printed in the papers that day, that the mortality of London was only 26 per 1000, whereas in Liverpool it was 42 per 1000, and there were several large towns which had a higher death-rate than London. And yet, in the face of these facts, their medical officers of health had the coolness to tell the vestries (by whom they were engaged and paid) that they did not do their duty in regard to public health! Dr. Hillier, in one portion of his remarks, said that fear was an element calculated to do harm in cases of epidemics, and yet he actually drew up a wordy meaningless report, which was calculated to bring upon the public that very fear which he deprecated. It was wrong, highly wrong, for him thus to alarm the public mind." The mortality of St. Pancras, we should say, varies from 31 per 1000 in some parts to 14 per 1000 in others. Ten thousand poor persons have been recently unhoused by the Midland Railway; the district is one of the most populous in London, and typhus fever has been and is epidemic. Dr. Hillier's report, which was so politely characterized as "wordy and meaningless" by this distinguished person, is one of the clearest, ablest, and most sensible documents of its kind which we have read. It points out in brief, clear, telling paragraphs the plague-spots of the parish and the general sanitary defects, and suggests practical and plain means of setting about to remedy them. The attitude of the vestry, when reminded of their duty, must shock, if it does not surprise, thinking men. The ignorance, the narrow-mindedness, and the entire incapacity to grasp the importance and responsibility of the public duties entrusted to them, are such as must convince those who will take the trouble to read the report of the meeting in the *Borough of Marylebone Mercury* for Saturday, Jan. 26th, that such a board is unfit for the discharge of the most important work which is at present assigned to it.

THE MINUTES OF THE COLLEGE OF SURGEONS.

IN 1863 the Council of the College of Surgeons determined to comply in some degree with the just demands of the corporation they represent and govern, by publishing the Minutes of their proceedings. We *believe* (for these great doings are shrouded in the deepest secrecy (?) by the College authorities) that Mr. Quain proposed and Mr. Partridge seconded the motion in question; at least, Mr. Quain did not deny the "soft impeachment" when he indignantly replied, last June, to the insinuation of one of our correspondents that, in the words of Edgar Poe's irrepressible raven, he had done "only this and nothing more." We are now in 1866, and, for aught we can learn, are as far as ever from the Minutes we have been so long anxiously expecting. A "Calendar" has, it is true, been thrown to the profession as a sop for Cerberus (price 5*s.*); but our appetite is by no means satisfied, in fact is only whetted, by the details of expenditure therein contained. The difficulty of moving the Council as a body is well understood; but we would ask the proposer and seconder of the motion for the publication of Minutes how it is that *they* are content to see themselves baffled in the way they are?

In the letter addressed to this journal by Mr. Quain last June, he states that he has always thought that the Fellows of the College "ought to have open to them sufficient information as to the manner in which the retiring members of the Council have discharged their trust. I should wish to see that information given openly." In less than six months three of Mr. Quain's fellow-councillors will be applying for re-election. Where is the *sufficient* information respecting the discharge of their trust? The Calendar tells us there have been sixteen meetings of the Council during the academical year. Where are the fruits?

Mr. Partridge is senior to Mr. Quain on the Council; he is now vice-president, and will in all probability be president next year, therefore he at least ought to have some little weight at the council-board. Both gentlemen are members of the Court of Examiners; so that they have gained their "desired haven," and ought no longer to be in dread of the "old boys" who punish their rising juniors by passing over them when an examinership is to be filled up. Will neither of them make an effort to hatch the egg which they so successfully laid three years ago amid great cackling, but which, we fear, must by this time have become seriously addled by being so continuously "sat upon"?

We warn the three retiring members of the Council of the inevitable and inexorable fate which awaits them if they are not prepared with a better account, official or non-official, of their stewardship than the vague generalities indulged in on the last occasion. A burnt child dreads the fire; and the body of Fellows will not be ready to return a second time candidates who promise everything and perform nothing.

RUSSIAN OPINIONS ON RINDERPEST.

THE Consul-General at Odessa has transmitted to the Foreign Office a report, dated Jan. 8th, upon the cattle plague, which professes to summarize the opinions of the principal landowners and cattle-breeders of Bessarabia. It accords with the views announced here from the first by competent authorities, and which we strongly urged for acceptance, as to the dangerous inutility of testing therapeutical methods in a disease so subtly contagious. Unfortunately those opinions, and the consequent advice to employ at once severe restrictive measures to prevent the plague from spreading, were systematically derided by facile writers for the daily press; and at present the disease is so widely spread that the Government and the farmers are at their wits' end to know how to make their measures strictly operative, at whatever cost. We gather from the report that vaccination is considered favourably, and is likely to be tried in the provinces which are the home of this disease:—

"One opinion only appears to merit serious attention, and is now under anxious consideration. That opinion is in favour of vaccination, which the Imperial Government has undertaken to introduce throughout the infected districts by competent veterinary surgeons employed for that purpose. Time only can decide whether vaccination will afford a sure protection from the disease; but at present it seems to promise more satisfactorily than anything else which has been tried."

SIR JOHN DOMINIC CORRIGAN, BART.

THE elevation of Dr. Corrigan to the honour of baronetcy is a step which will give great satisfaction to all the members of the medical profession. Dr. Corrigan has long been recognised as the existing head of the Irish medical body; nor could it be represented by a more hearty, genial, accomplished, and judicious gentleman. As a physician and as an administrator Dr. Corrigan is equally distinguished; and his personal and professional character are such as will enable him to grace the honour bestowed on him. The selection is in every respect a happy one.

The Lancet Sanitary Commission

FOR

INVESTIGATING THE STATE

OF THE

INFIRMARIES OF WORKHOUSES.

REPORTS OF THE COMMISSIONERS.

METROPOLITAN INFIRMARIES.

No. X.

BETHNAL GREEN INFIRMARY.

THE Workhouse of Bethnal Green is situated in Bonner's-hall-fields, in the north-east of the metropolis. The parish contains a population of 120,000, and until the year 1743 was united with Stepney. Silk-weaving, a fluctuating and badly-paid occupation, is the principal employment of the people, who, as a rule, are housed in miserably crowded cottages, and in still worse conditioned streets and alleys. The whole district is low and flat, scarcely above high-water mark.

The house, a brick structure of three stories, was erected in 1840, and consists of a centre block and two irregular wings, the front looking east. The south wing is devoted to the able-bodied; the north wing, which adjoins the Regent's Canal and Victoria Park, is occupied by the sick, insane, and infirm, and forms the infirmary proper. On three of its sides it is surrounded by houses. Altogether the fabric has a very prison-like aspect. The Poor-law Board has sanctioned its occupation by 1400 inmates; but on the occasion of our first visit it was overcrowded with 1100; and we found it on the 17th inst. still more so, with an increase of upwards of 200. To this subject, however, we shall recur before concluding; in the meantime we may unhesitatingly express our conviction of the unfitness of the house in its present condition for the hospital wants of the district.

The drainage appeared to be successfully carried out. In many parts of the house there was a deficiency of water. The rule of supply was to open the taps at seven A.M. and shut off at five P.M. Now, as the water is raised by steam power, surely there is no necessity for such niggardliness.

The absence of classification is painfully evident in every part of the house. The rule is to disperse the imbeciles through the various wards, where, from the imperfect supervision, they are not properly cared for. When, however, they become uncontrollable, they are sent to an asylum. A very objectionable practice is to mix foul cases with ordinary patients: intelligent care and successful practice must be set at nought amid such confusion.

Before describing the sick wards, twenty-seven in number, we must very briefly point out an irremediable defect in the construction of the principal part of the house. Many of the wards are double, having a passage or corridor common to both running down the centre; the consequence of which is the partial obstruction of light,* air, and ventilation. In all these wards space was very deficient, so much so that in passing down the centre of the wards between the ordinary table and the beds we had often to sidle along crab-fashion. To make matters worse, these are day and night wards, and many of them were not only overcrowded, but there were also "boarders," who spent their days there, being lodged at night amongst the pickers of oakum. Many of these overcrowded wards, with very defective sanitary conditions, had not the bare allowance of 300 cubic feet per case. Authorities are agreed that for infirmary wards not less than 1200 feet should be allowed, four times what is here conceded. The floors, walls, and ward furniture were very clean; but the bare white-washed bricks were cold and chilling. There was a good

* Many of the windows are six feet from the floor—humanely designed, without doubt, to prevent the inmates seeing the outer world.

supply of books. Excepting for "wet cases," which have straw beds and mackintoshes, flocks were used for the beds and pillows. Again we must condemn this bed material as being unfitted for the sick, and, in the long run, not so economical as horse-hair. The ticks were insufficiently filled, and the material was loose and lumpy.

Passing from generalities, we come to speak of individual wards. And first of three, with eleven beds, devoted to insane women, whom we found under the care of a pauper nurse and helper. Here were three "wet cases" in the inner room, with very defective light, and still more defective ventilation. The floor in two cases was saturated with the overflowings, and the room had a strong ammoniacal odour. No watercloset, excepting across an open yard, was provided; the consequence was that a bed-chair had to be used. Many evils of a kindred nature were found in the "bedridden women's ward" No. 12, where were sixteen beds; and in others adjoining. Indeed, the rule amongst all the wards devoted to women was the use of the "night-chair," to the exclusion of the watercloset, there being none nearer than across the yard. Not all the wards had even a screen to be put round the chair; and in one we learnt that the custom was to use the night-chair outside on the landing of the staircase. A more disgusting state of things cannot well be conceived: overcrowding, sickness, defective light in many cases, no proper baths or lavatories, and the whole ejecta passed in rooms used through day and night. In all these wards there is no system of night-nursing.

The rule in the infirmary is to give the last meal of gruel or arrowroot at eight P.M., and the first meal afterwards is at a quarter past seven A.M. In one of the aged women's wards, containing ten patients, the oldest being sixty-six and the youngest sixty-one, where this rule was in force, and, indeed, among the aged and bedridden as among the acutely sick, such an absence of providing for night-feeding is very injurious, and we direct the attention of the guardians to the necessity of making more humane arrangements in this respect. It should not be left to a special order of the medical officer in some exceptional cases, but regular arrangements should be made for the purpose.

The children's wards are very defective in that they have no day-room attached. The children here are altogether very badly off. They are sickly; and ophthalmic and cutaneous affections are very prevalent amongst them. The washing arrangements are wretched. There is a great want of baths. In one ward we learnt that seventeen children were washed daily in one pail, several in the same water, and dried with the sheets. This was, we believe, the fault of the nurse, for she could have had towels if she had asked for them; but in a really well-managed house, the fact of her not drawing a proper supply of towels would have attracted attention. There was a want of occupation and amusement for the children. They ought all to be moved from the house; the room they occupy is sadly wanted.

In the male portion of the house there was even a greater amount of overcrowding than amongst the females. Here, however, we found closets, but a like deficiency of baths or lavatories. These closets were of a very defective character—latrines, two to forty-five men; and said to be flushed twice a day, but smelling badly. In one of these wards, with very deficient space, were eighteen beds and ten bedridden patients, five out of that number being wet cases. All the latter had straw beds and good mackintoshes.

As a painful illustration of want of room in this house, we may mention that in the ante-room—practically the same room—of a trapless closet were three beds, occupied by a paralytic, an epileptic, and the wardsman respectively. The two unfortunates were lying on low beds about six inches from the floor, in close contiguity to the closets, which were, in fact, merely parted off by a partition not rising more than half way to the ceiling. The three seats were part of a common latrine, not parted off from each other, and stank abominably. They were used by some sixty-five persons, who not only passed through the "ward," but might be said to evacuate within the ward; for ward and closet constituted practically but one small room. It is difficult to say whether the injurious consequences of this arrangement are not worse than those of the total absence of closets in the female department below. For if the pans be used in the room—a disgusting arrangement enough—it is yet possible that they are pretty quickly removed, *in the daytime at least;* but these open closets in the ward are a *persistent and filthy nuisance.* In the upper floor lay a paralytic adjoining the pail-and-brush closet. All the upper wards are roof wards, with double inclines of the ceiling, and were very musty from want of space: they were clean, but overcrowded. Several of them had "boarders" intruded amongst them, who were sick and under medical care, but for whom there was no day room.

Before quitting the wards, we must speak especially of the lying-in department. It includes four very small, dark, badly-lighted, and badly-ventilated rooms; the innermost containing the "labour bed." When we first visited the house we found seven of these beds filthy, three particularly so; but on a re-inspection we were gratified to find them clean. The nurse in charge is seventy-two; she has a helper who is much younger. About eighty births take place annually in these wards, about two-thirds being illegitimate. The beds here for mother and child are absurdly narrow; barely wide enough, indeed, for one individual.

The responsible work of nursing the sick, 550 to 600 in number, is committed to the care of two paid nurses, who receive £30 and £24 a year respectively, and about forty pauper nurses and helpers. Neither of these paid officials has been trained, but both displayed considerable aptitude for their duties. On being questioned as to the amount of work, both said they had more to do than they could get through, independently of the difficulty of managing the forty pauper nurses, whose tendencies to drink cannot be controlled.

A better example could not be taken of the bad state of the nursing in the houses than that which is offered by the male insane ward. The ward itself, be it said *en passant*, is a disgrace to the institution, and its continued use for the lodgment of demented patients ought not to be tolerated. Small, dark, ill-ventilated, and with no outlook, the rooms are utterly unfitted for the purpose. One patient had been there six weeks, one five weeks, and one a fortnight. The ward was under the charge of a male pauper, a weaver by trade, who had no knowledge of nursing, and was waiting for the fine weather to resume his occupation. He had left the ward temporarily under charge of a female nurse, to whom a noisy lunatic was addressing extravagant terms of endearment. Patients such as this ought not to be retained in the house. The wards may do as a lock-up for a night; but as an "insane department" they are scandalously bad, and confinement in them for two or three weeks must have the worst effect upon the menta malady of the unhappy patients.

The quality of the food in all its varieties we found to be good. With the cooking, however, we are not satisfied. Excepting mutton chops, which are dressed by the order of the doctor, all the animal food is steamed. Apart from the importance of a change, which, to the sick man's stomach, is really necessary, steamed meat is neither so nutritious nor so easily digested as roasted meat. We trust that the authorities will accept our suggestion and give at least four days a week roast rather than steamed meat.

The dietaries are open to grave objections:—

Full diet is No. 2, and provides daily, for adults, five ounces of steamed meat, eight ounces of potatoes, twelve ounces of bread and butter, and one quart of tea; for children, three ounces of meat, six ounces of potatoes, eight ounces of bread, and one pint of milk. The animal food ought to be increased.

No. 3 gives, for adults, three meat dinners as No. 2, and four dinners of bread, four ounces, and one pint of milk; for

children, three meat dinners as No. 2, and four dinners of bread, four ounces, and three-quarters of a pint of milk. No condition of the sick can justify such a diet as this. If animal food is needed on a Sunday, why not on Monday, Wednesday, Friday, and Saturday? This diet ought to be a thing of the past.

No. 4: for adults, six ounces of beef for beef-tea and four ounces of bread for dinner, eight ounces of bread and one quart of milk for breakfast and supper; for children, four ounces of beef for beef-tea and three ounces of bread for dinner, six ounces of bread and one pint of milk for breakfast and supper. The doctor can order beer or wine as an addition to any of these.

The diet of the "aged and infirm" is three meat dinners, two suet puddings, and two pea-soups per week. The waste of such a dietary from the total inability of the infirm to eat or digest suet pudding and pea-soup as a dinner we need not here dilate on. This ought to be abolished.

The medical charge of this large infirmary, with an average of 600 beds, is committed to Mr. Smart, whose stipend is £160 per annum. This includes midwifery fees and the labour of dispensing. Since the Holborn inquiry drugs have been paid for by the guardians. Mr. Smart visits daily, sometimes twice a day, and occasionally pays a night visit. On both occasions of our inspection we had the benefit of his presence. We learned from him that he could not perform his ordinary duties under from three to four hours per day. In justice to Mr. Smart, who has an unpaid deputy as his partner (Mr. Moore), we are bound to say that his cases were well cared for, as far as practicable with the many deficiencies. Let us compare with this workhouse infirmary the London Hospital, which has a less number of beds (445), but which has no less a staff of medical and surgical officers than fifteen, besides two consulting officials. Now, whilst we have no desire to make it appear that the actual work of the two hospitals is strictly parallel, still we have no hesitation in saying that, to do the work properly, there should be at least two medical officers—one resident—and a resident dispenser.

In looking over the medical records of the workhouse, we learned that in 1849 there were 218 cases of cholera admitted, 104 of which proved fatal. There was, however, no case among the inmates during this epidemic; neither was there in 1854. Fever and small-pox cases are generally sent away; contrary, however, to this custom, in 1864 several probationary wards were devoted to the treatment of small-pox, and all the cases did well.

The average mortality in this house from all causes is from 240 to 250. This large number of cases ending fatally of itself shows the necessity for a more efficient system of nursing and the appointment of a resident medical officer.

In conclusion, we will recapitulate the leading points of this report.

1st. That the present house is too full; the sick, infirm, and imbeciles are sufficient to fill it. We, therefore, recommend that the able-bodied and children should be removed; the former to some place where remunerative labour would be easily obtained, and the latter into the country, where fresh air and humanizing habits would help them to throw off the evils of pauper life. The guardians are, we believe, willing to carry out improvements; but they want funds. Such being the case, they should help a combined effort from the poorer parishes to obtain a uniform rate for the whole of the metropolis.

2nd. The paid nurses must be increased; one should be appointed to every fifty beds.

3rd. Additional windows, in some cases enlarged windows, are required in several of the wards.

4th. Ventilation is very defective throughout the house; the whole building requires improvement in this important respect.

5th. The number of waterclosets is very deficient, and in a great number of wards they are entirely absent. The latrines ought to be removed, and efficient waterclosets constructed in their places. A supply of water to these closets should be constant.

6th. Baths and lavatories are very much needed.

7th. The dietaries require revision; more animal food and milk ought to be given. The diets Nos. 3 and 4, and that for the "sick and infirm," ought to be blotted out, and more liberal ones substituted.

8th. Additional medical officers are required; one should be appointed as resident and two as visiting, and a dispenser should also be appointed.

Correspondence.

"Audi alteram partem."

THE PRELIMINARY SCIENTIFIC EXAMINATION OF THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—In common with other school teachers I have received a circular from Dr. Carpenter pointing out the failure of many of the candidates for the Preliminary Scientific Examination at the University of London. Having had some experience in the preparation of students for this examination I venture to address a few lines to you with the object of indicating what appear to me to be the chief causes of the want of success exhibited by the candidates, and complained of by the Senate, and also to suggest some slight modifications of the examination which I believe would be advantageous. That the proportionate number of failures should be greater in the Preliminary Scientific than in the later examinations is scarcely a matter of surprise. The number of subjects embraced by the various examinations of the London University, and the stringency with which they are conducted, necessarily effect, as they are rightly intended to do, the exclusion of the idle, the desultory, and the unintelligent; and this, of course, tells more strongly in the earlier than in the later ones, in which, as Dr. Carpenter observes, the number of rejections is comparatively small. I am fully aware of the anxious care and deliberation bestowed by the Senate upon the nature and extent of the elementary subjects proposed for this examination, the importance of which in training the student to habits of correct observation and precise reasoning is acknowledged by all. At the same time it must be admitted to be a very difficult one, especially when it is remembered that the majority of those presenting themselves are young men who have only recently left school, and who are in the first year of their attendance on hospital. They are required to possess a very fair practical knowledge of Inorganic Chemistry, and of Botany and Vegetable Physiology, Zoology and Comparative Anatomy. In addition to this they must keep up, and even extend, their knowledge of Mechanical Philosophy. These subjects are almost universally regarded as "dry;" and even when there is a taste for one or other of them, the pursuit of which possesses so intense an interest for the advanced student, the young beginner, overlooking their advantage in improving his memory and reasoning powers generally, is apt to regard the others as a schoolboy does his Greek and Latin, and to ask, What good will this knowledge be to me in practice? Now, I think it may fairly be said that unless the student entering the hospital (say in October) is able to devote one whole year to the acquirement of these subjects he will scarcely be able to gain such an amount of information upon them as the examiners require; and if he be rejected he must wait for *twelve months* before he can again present himself. If he is unable to devote a year to this examination he must attend, in accordance with the regulations of the College and other examining bodies, lectures on Anatomy and Physiology, as well as dissect, during his first winter session. The most hardworking student finds this too much, and, according to my experience, passes or is rejected in proportion as he has neglected his hospital work or the

subjects of his coming examination. Dr. Carpenter states that the majority of candidates pass in the subject of Chemistry, whilst they fail in those of Botany and Zoology. This appears to me to be precisely what might be expected. The arrangements for teaching Chemistry, both practically in the laboratory and theoretically in the lecture-room, are good in all the London schools. Six months lectures are given in the winter session, and the student can pick up readily enough the practical chemistry required. Moreover, the subjects to be examined upon are laid down in the syllabus in a remarkably definite manner: the student knows exactly what he must learn. Lastly, the books on this subject are numerous and excellent. But in regard to Botany and Zoology all this is reversed. On Botany the student may hear about thirty lectures, and take two or three excursions into the country in the course of the summer, in which he learns but a very small modicum of Practical Botany; and on Zoology many students go up without attending any lectures at all; whilst in both subjects, but especially in the latter, there is great want of some compendious but lucidly written work which might teach the student how to observe for himself.* It is not easy to suggest a remedy for this state of things, but I would venture to propose the following alterations in the mode of conducting the examination. In the first place, I think the attendance of the student on a course of lectures on Zoology and Comparative Anatomy should be rendered compulsory; and, secondly, I think that the candidates might be allowed, at their own option, to be examined on all the four subjects together, or on Chemistry and Mechanical Philosophy alone at the end of the first winter session, and on Botany and Zoology at the close of the following summer session, at the same time allowing those, if any there be, who have been rejected in the spring examination, to present themselves again on all four subjects at the autumn examination. The arrangement here recommended is only in accordance with what is already done at the first M.B. examination in regard to Physiology, which the candidates are allowed to take separately. If the examination on Botany and Zoology could be arranged for the last two days of September it would be still more advantageous, since it would enable the candidates to acquire a knowledge of Botany where I am sure it will be admitted on all hands it can alone be gained, in the fresh air and in the fields. Thus many would have the opportunity of passing an examination which all retire from with a keen sense of regret, and many, I really believe, from the impossibility of devoting another whole year to it in the midst of other work.

I remain, Sir, yours obediently,

HENRY POWER, M.B. Lond., F.R.C.S.

Westminster Hospital, Jan. 1866.

* The little shilling pamphlet of Prof. Lindley, entitled, "Descriptive Botany," is admirable in its way, but might be greatly improved if a few more descriptions of the common plants likely to be shown at an examination were appended.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

YOUR "Annotation" in a late number, on the proposed "homœopathic experiments" here, having left you in a state of "breathless suspense" as to the result of these experiments, I write to relieve you from that unpleasant condition, by informing you of what has been done, and what has been undone, by the sanguine disciples of Hahnemann, after their amusing meeting of "wise men" from every point of the compass, and from which so much was hoped for, and so very much promised. It appears that, having waited in vain for the "coming man"—the only requisite to force belief in globules upon the most sceptical—Mr. Kennedy himself undertook the treatment of two cows affected with rinderpest; and, to do him justice, I am told that he was most unremitting in his attention to his bovine patients. So far as homœopathy was concerned, the animals had every chance, had there been a chance for them in the system; but they, nevertheless, died in the usual way in about a week. We next heard that the coming man had arrived. The homœopaths had "caught a Lord;" at least, a Mr. Lord came down from the south. Whether this was the "enthusiastic young gentleman from Mr. Epps's large establishment in London, who knew nothing about cattle" or not, this deponent sayeth not. Mr. Lord, wherever he came from, was apparently no mere young man from the country, for he evidently knew what he was about, and at once declined to proceed with the treatment unless a very large number of affected cattle, forty, I believe, were handed over to him. Fortunately, however, for the cow-owners here, this was an impossible condition, as the disease had been declining for some weeks. So Mr. Lord departed, and, after all their palaver at Mr. Kennedy's, they cannot point to a single case where recovery took place after their treatment.

I am sorry to say that Dr. Murray, after resisting infection for several months in his arduous attendance as physician at our Fever Hospital, has contracted the disease. He was seized with typhus very suddenly, and at one time his case bore a very serious aspect, but he is now on a fair way towards recovery, and his progress is watched with much solicitude by his numerous professional and other friends. At the last meeting of our Medical Society, the opinion was expressed that a year was too long a period, without change, for the physicians' attendance upon the Fever Hospital. In ordinary times the arrangement might do well enough, but for the last two or three years, when fever might be said to be endemic here, the wear, tear, and incessant anxiety of such protracted attendance, were enough to break down if not ruin the strongest constitution. The Fever Hospital itself is sadly behindhand in accommodation, and the cubic allowance of air to each patient is becoming "small by degrees," the patients lying two in a bed,—a very likely means, you will consider, to propagate and intensify the typhus poison. Dr. Charlton brought before the last meeting of our Society interesting particulars of a case of poisoning by carbonic oxide. It occurred at the works of Sir Wm. Armstrong, where some iron furnaces are constructed upon a new principle, and, in working, they appear to consume their own vapours. There is, however, when material is thrown in, some slight escape of gas. Of this danger the workmen had been warned, but as the carbonic oxide is invisible and inodorous, they had become indifferent. The patient was a strong and temperate man, twenty-two years of age. At 11 A.M., on the morning of Nov. 5th, he was struck down insensible while before the furnace, recovering himself in the afternoon; he resumed his work the same night, when he inhaled a second dose, and immediately became insensible. The pulse never rose above 100 until the third day, when it reached 110; the pupils were insensible, and before death became dilated; gangrene of the lungs set in, and this making rapid progress, he died on the fourth day from exposure to the poison.

Jan. 22nd, 1866.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners on the 23rd inst.:—

Bousfield, Edward, Mansfield, Notts.
Chambers, Frederic Evans, Camden-town.
Chiappini, Antonio Lorenzo, Cape of Good Hope.
Earle, Frederick, Edgeware, Middlesex.
Edgelow, George, Kensington-square.
Ennals, Charles Thomas, St. Neots.
Ewen, Algernon, Long Sutton.
Haslam, James, Reading, Berks.
Horne, Edward, Isleworth.
Legg, John Wickham, Alverstoke, Hants.
Lloyd, Ridgway Robert Syers Christian Godner, Bury St. Edmunds.
Major, Napoleon Bisdee, Hungerford.
Manby, Frederic Edward, East Rudham, Norfolk.
Melson, John Waller, Birmingham.
Molyneux, John Lea, Wigan.
Muriel, George John, Ely.
Plaister, William Henry, Bristol.
Shaw, Henry Lissmore, South Mimms.
Wood, Herbert, Ashton-under-Lyne.

The following gentlemen were admitted members on the 24th inst.:—

Ackroyd, George, Leeds.
Bradshawe, Paris.
Eaton, John Chamberlin, Ancaster.
Ellis, William Henry, Willingham, Cambridgeshire.
Parr, Arthur John, Newport, Monmouthshire.
Hewetson, Richard, Bayswater.
Hunt, Frederick Everard, Shortlands, Kent.
Jackson, Arthur, Sheffield.
Lawrence, John, Clifton.
Mountain, William John, Leeds.
M'Williams, Joseph M'Caregher, Omagh.
Nolan, William, Athboy.
Percival, Thomas, Leeds.
Ransford, James Inglis, Sydenham.
Ridley, Herbert, Newcastle.

Royds, William Alexander Slater, Bedford.
Simpson, Thomas Henry, Fore-street.
Smith, Henry Cecil, Bayswater.
Tayler, George Christopher, Trowbridge.
Wadd, Frederick John, Kilburn.
Ward, John Bywater, Leeds.
Wright, William Evatt, Brixton.

NEW FELLOWS.—At a meeting of the Council of the Royal College of Surgeons on the 11th inst., the following gentlemen, having been elected Fellows at previous meetings of the Council, were admitted as such :—

Allard, William, Tewkesbury; diploma of membership dated April 12th, 1839.
Taylor, Henry Sharp, Guildford; June 12th, 1840.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on the 18th inst.:—

Gowing, Benjamin Chasten, Lowestoft.

TRINITY COLLEGE, DUBLIN: MICHAELMAS TERM EXAMINATION FOR M.B.—List issued by the examiners for medical degrees, December, 1865 :—

Swanzy, H. R., B.A. Dub., Dublin Hospitals.
Compton, T. A., B.A. Camb., St. Bartholomew's.
Benson, J. H., B.A. Dub., Dublin Hospitals.
Mayo, C., M.A. Oxon., St. Bartholomew's.
Keough, E., M.A. Dub., Dublin Hospitals.
Greene, F. W., B.A. Dub., Dublin Hospitals.
Gamble, S. B., C.B. Dub., Dublin Hospitals.
Higginson, F. W., S.F. Dub., Dublin Hospitals.
Candidates, 10. Unsuccessful, 2.

THE CHOLERA IN PARIS.—There has been no fatal case of cholera in Paris since the 14th inst.

PROFESSOR HUXLEY, F.R.S., will commence his course of lectures at the Royal College of Surgeons on Friday, the 2nd proximo.

THE well-known Paris shop for ready-made clothing, "La Belle Jardinière," is to be pulled down to make room for the new Hôtel Dieu.

LONGEVITY.—The celebrated German physician, Dr. Julius von dem Fischweiler, died a few days ago at Magdeburg at the advanced age of 109.

PHARMACEUTICAL ETHICS.—Mr. Joseph Ince has been requested by the British Pharmaceutical Conference to write an essay on Pharmaceutical Ethics.

ARREST OF A SURGEON.—Mr. John Permewan, of Redruth, has been arrested on an alleged charge of having committed two forgeries on a metropolitan shareholder.

A FARMER in Holland has refused to allow his cattle affected by the plague to be destroyed, and violently resisted the authorities.

WEATHER AT PHILADELPHIA.—On the 8th inst. the thermometer was twelve degrees below zero, lower than it has been known for a century.

THERE was a crowded audience on Sunday evening at St. Martin's Hall to hear Dr. Carpenter lecture on "The Antiquity of Man." Dr. Carpenter spoke for about an hour and a half, and then there was a performance of sacred music.

THE CATTLE DISEASE IN HOLLAND.—The cattle disease is spreading in all parts of Holland, notwithstanding the precautions taken by the authorities to prevent the admission of diseased cattle into the country.

A STRONG feeling exists in Paris (says the *Abeille Médicale*) in favour of making the studies and examination of students more practical than they are at the present time.

MORTALITY OF LONDON.—There were 1569 deaths in London last week, or seventy-two below the computed average. Typhus and whooping-cough appear to be the most fatal causes of mortality.

CHOLERA CONFERENCE.—A Constantinople despatch informs us that the nomination of the members has been completed. Its constitution will be entirely diplomatic. The conference is expected to meet in the first week of February.

A MUNIFICENT DONATION.—At the usual meeting of the Weekly Board of the Middlesex Hospital a few days ago, the Chairman, Mr. Michael Smith, handed in a donation of £20,000 from an anonymous friend of the charity.

SMALL-POX IN PARIS.—The small-pox is on the increase in Paris. The Minister for War has ordered the students in the Ecole St. Cyr, the Polytechnic School, and the School of La Flèche to be vaccinated.

DEATH FROM CHLOROFORM.—Another death from chloroform has occurred: it was at St. Mary's Hospital. The patient was an apparently healthy man, and the operation was evulsion of the nail. Chloroform was administered on a handkerchief; all the proper precautions had been taken.

RAILWAY SURGERY.—The guards of the trains on the Swedish railways are required to have a knowledge of the elements of surgery, that, in the case of accidents, they may be able to render medical assistance. An ambulance, fitted up with every requisite, forms part of each train.

THE CHOLERA AT ALEXANDRETTA.—Letters from Aleppo report the reappearance of cholera at Alexandretta, in which, and its neighbourhood, many new victims have succumbed to its ravages. The cold had set in, but its effect on the epidemic was much less than had been hoped.

INDIAN CINCHONA BARK.—Mr. M'Iver has analysed the cinchona bark grown in India, and does not appear to report very favourably of its per-centage of quinine. He recommends the medical profession to try the effects of the cinchonidine, an alkaloid largely present in the Indian specimens.

CHOLERA AT NAPLES.—The late outbreak of cholera at Naples caused a considerable diminution in the receipts from visitors to Pompeii. In the three last months of 1864 these receipts amounted to 40,000 francs, while in the corresponding period of last year they only amounted to 400 francs.

POISONED WINE.—Messrs. Boudet, of Castelmoran, were convicted at the Imperial Court of Agen, in France, of selling wine containing a quantity of litharge, to reduce the acidity of pricked wine. Three persons had died in consequence of drinking it, and several others had their limbs paralysed. The judge sentenced them to one year's imprisonment, and imposed a fine of £20.

THE Secretary of the London Hospital has written to *The Times* stating the result of the late inquiry into the alleged case of neglect at that institution. The complaint was not without foundation, but the fault seems to have been that the amount of work to be done was beyond the means of the limited resident surgical staff. Steps had previously been taken to increase their number, and a third house-surgeon has been appointed.

SMALL-POX VEHICLES.—A correspondent from the neighbourhood of the Small-pox Hospital directs attention once more, and most usefully, to the frequency with which cabs are driven to that hospital, carrying small-pox patients. It is greatly to be regretted that the subscription for proper vehicles, started by Sir Stuart Donaldson, has not yet been satisfactorily responded to by the public, only a small part of the funds required having been raised.

WRECK OF THE "LONDON."—Amongst those who have gone down in this ill-fated vessel in the Bay of Biscay was Mr. John Vivian Faull, the surgeon of the ship. He had been several voyages to Australia in the service of the Messrs. Wigram, and had an accurate knowledge of his profession. Mr. Faull was thirty-seven years of age, and had formerly been one of the assistant medical officers at Colney Hatch Lunatic Asylum. His premature death, indeed, has caused much sensation and regret among the official staff and patients of that institution.

SPURIOUS VACCINE LYMPH.—A correspondent of *The Times* exposes a most daring and wicked fraud which, it is said, is just now being perpetrated on a large scale. Since vaccination has been recommended as a protection against the cattle plague, there has been a sudden increase in the demand for vaccine matter, and some dealers are selling under that name a mixture of collodion and croton oil or tartar emetic, which produces an eruption, but has, of course, none of the virtues of real vaccine. It is infamous at a time when it is of so much moment that the question whether the pest is a form of small-pox, and vaccination an effectual precaution against it, should be fairly tested, that such a difficulty as this should be interposed. The mischief is not limited to the deception of individual owners of stock, but injures the whole country by discrediting what may prove to be a safeguard against a national calamity.—*Pall-mall Gazette.*

POOR-LAW MEDICAL REFORM.—Mr. Griffin requests us to state that he has received the following subscriptions towards the funds of the Association:—J. Davison, Boston, 5s.; O. Johnson, Newark, 5s.; J. M'Master, Portsea Island, 5s.; P. Frank, M.D., late 80th Regiment, Mentone, 60s.; G. Bury, Whetstone, 10s.; B. Hands, Edmonton, 10s.; A. T. Brett, Watford, 10s.; H. Terry, jun., Hardingstone, 5s.; E. Dudley, Hardingstone, 5s.; W. Percival, Northampton, 5s.; T. M. Bryan, Northampton, 5s.; J. H. Willis, Tavistock, 5s. Mr. Prouse, of Amersham, has received the following:—R. Brent, St. Thomas, 20s.; H. Kelley, Uxbridge, 10s.; T. Dickenson, Chelsea, 21s.; R. Kerswell, St. Germains, 5s.; E. M. Wrench, Bakewell, 5s.; H. Brooks, Bridgewater, 10s.; J. Burton, Walsall, 20s.; N. Buckley, Rochdale, 20s.; W. Wilson, Chesterfield, 42s.; Wright and Allen, Basford, 5s.; J. Hembrough, Caistor, 10s.; E. Buckell, Winchester, 10s.; W. H. Griffith, Hinckley, 10s. 6d.; E. G., 10s.; Dr. Bell, Cockermouth, 10s.; R. Bryden, Tiverton, 5s.; C. E. Claremont, St. Pancras, 10s.

BEQUESTS.—The late Mr. George Elkington, of Pool Park, near Ruthin, Denbighshire, and formerly of Birmingham, has bequeathed £500 to the Birmingham General Hospital, and £300 each to the Queen's Hospital and General Dispensary of that town, and large sums to other charities not strictly medical. Among the donations by workmen in aid of the funds of the Bristol Royal Infirmary sent in last week to the committee was one of £115 9s. 9d., contributed by the work-people in the employ of Messrs. Derham, wholesale shoe manufacturers of that city.

JUNIOR MEDICAL SOCIETY OF LONDON.—At a meeting held on January 17th, at Charing-cross Hospital, Mr. E. Sandwell in the chair, Mr. Archer Farr read a paper on Sea Scurvy, its Causes, Treatment, and Prevention. After giving a brief account of the condition of the blood in this disease, in order to show that it originated in non-nutrition either from want of food, or from the imperfect assimilation of food, the author proceeded to treat of the various anti-scorbutic substances, showing the action of lime, lemon-juice, and vegetables, and denied the efficacy of the salts of potash. He thought the existence of scurvy a disgrace to the nation, as it was no doubt promoted by the present system of victualling our seamen in the Royal navy and merchant service. He had treated a patient on milk diet, and found it effected a cure, but taking longer than when the diet was composed of fresh meat and vegetables. Mr. O. W. Berry then showed some pathological specimens of dislocations of the astragalus, as well as a very large fatty tumour. After a lengthened discussion upon the paper and cases, in which Messrs. Berry, Adams, Turner, and Sandwell took part, the meeting separated. The next meeting will be at Guy's Hospital on February 20.

Obituary.

SIR JOHN M'GREGOR, K.C.B.

THIS distinguished Military Surgeon and Physician died on the 13th inst. at Ryde, Isle of Wight, at the age of seventy-four. He was the second son of Mr. Duncan Macandrew, of Culross, county Perth, N.B., and assumed the name of M'Gregor instead of his patronymic in August, 1863, the family being descended from the M'Gregors, of Rora, the name having been changed after the rebellion in Scotland in 1745. After his education at the University of Edinburgh, he entered the medical branch of the army in 1809. He served in the expedition to Walcheren in 1809, including the taking of Terveer and Fort Ramakins, and siege of Flushing, also with the Army in South Beveland. Served in the Peninsula in Lord Hill's Division from 1811 to 1813, was present at the siege of Badajoz and retreat from Burgos. Was present at the capture of Fort Minora, and the surrender of Kurrachee, Lower Scinde. Senior Medical Officer of the Army sent for the relief of the force employed against the Fort of Kujjuck, Upper Scinde. Present during the investment of Candahar, end of 1841 and beginning of 1842. Senior Medical Officer of the Force sent for the relief of Kelat-i-Ghilzie; Senior Medical Officer of Sir W. Nott's Army from Oct. 1841 to Jan. 1, 1843; present at the actions of Kallee Shuk, Runja Ruk, Panjwaure, and Tilloo Khan, Baba Walla, battle of Gowine, storming the heights of Bellool (Ghuznee), capture of Ghuznee, affairs of Bene Bedam and Mydam, affair with the rear-guard from Soorkab to Gundamuck (Khoord Cabul Pass), affair with the rear-guard from Lundikhana, to Ali Musjeed (Khyber Pass). Acted as Principal Medical Officer, Queen's troops at the battle of Maharajpore, Dec. 29, 1843. Senior Medical Officer in the Kanadian Provinces during the rebellion in 1848. Served as Principal Medical Officer in N.W. Provinces of Bengal during the Mutiny in 1857-58, and was present at the siege and storm of Delhi, and capture of Lucknow (medal and two clasps). As before stated, he entered the Medical Department as Hospital-Assistant on June 27, 1809; became Assistant-Surgeon February 15, 1810; Regimental Surgeon, April 30, 1822; Staff-Surgeon, July 7, 1846; Deputy Inspector-General, Oct. 21, 1853, and was for some years stationed at Madras in that capacity before his retirement. Sir John was made an honorary physician to Her Majesty in August, 1859, and was, in recognition of his eminent professional services, created a Knight Commander of the Order of the Bath the same year.—*Army and Navy Gazette.*

SIR JOHN HALL, M.D., K.C.B.

INSPECTOR-GENERAL OF HOSPITALS.

This gentleman died at Pisa, Italy, on the 17th inst., aged seventy-two. Sir John Hall served the campaign of 1815 in Flanders; served the campaign of 1847 in Kaffraria, as head of the Medical Department under Sir George Berkeley, and was thanked in general orders (medal). In 1858 he accompanied Sir Harry Smith across the Orange River, as principal medical officer of the force employed against the emigrant Boers; was present at the battle of Boem Plaatz, and specially mentioned in Sir Harry's despatch, for services on the field, and subsequently thanked in general orders. Was principal medical officer of the army in Kaffraria, under Sir Harry Smith, during the campaign of 1851, and thanked in general orders on his being ordered to India. Served as principal medical officer of the Eastern Army from the 18th of June, 1854, to the 5th of July, 1856, without being absent from duty for a single day; was present at the affairs of Bulganac and Mackenzie's Farm, battles of Alma (mentioned in despatches), Balaklava, Inkerman, and Tchernaya, capture of Balaklava, siege and fall of Sebastopol, taking of the Rifle Pits and Quarries, assault of the Redan on the 18th of June (medal with four clasps, K.C.B., officer of the Legion of Honour, third-class of the Medjidie, and Turkish medal).

MEDICAL VACANCIES.

Cambridge Union—Medical Officer.
Droitwich Union (Hanbury District)—Medical Officer.
Hereford General Infirmary—Physician, vice Dr. Gilliland, resigned.
North London Consumption Hospital—Three Physicians.
North Wales Counties Lunatic Asylum—Assistant Medical Officer.

MEDICAL APPOINTMENTS.

J. D. BAKER, M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the newly-formed Hainton District of the Louth Union, Lincolnshire.

R. BOXWELL, L.K.Q.C.P.I., has been elected Medical Officer to the Workhouse Infirmary and Fever Hospital of the Gorey Union, Co. Wexford, vice J. Symes, L.K.Q.C.P.I., resigned.

W. F. BUTT, M.R.C.S.E., has been elected Resident Surgeon to St. Pancras Workhouse and Infirmary, vice J. Roberts, L.R.C.P.L., deceased.

T. L. CRAISTER, M.R.C.S.E., has been appointed Medical Officer for the Bramley Union Workhouse, and Public Vaccinator, vice R. Laycock, L.R.C.P.L., deceased.

E. F. FUSSELL, M.B., M.R.C.P.L., has been appointed Physician to the Brighton Dispensary.

W. H. HAYWARD, M.R.C.S.E., Medical Officer of Health, has been appointed Medical Officer and Public Vaccinator for the West Oldbury District of the West Bromwich Union, vice T. R. Cooper, L.R.C.P.Ed., deceased.

H. C. HILLIARD, L.R.C.P.L., has been elected House-Surgeon to the Surrey County Hospital at Guildford.

F. HUDSON, L.R.C.P.Ed., has been elected Medical Officer and Public Vaccinator for the Bramley District of the Bramley Union, Yorkshire, vice R. Laycock, L.R.C.P.L., deceased.

W. PHILLIPS, L.R.C.S.Ed., has been elected Medical Officer and Public Vaccinator for the Parish of Stronsay, Orkney, vice R. Clews, L.R.C.S.Ed., deceased.

G. H. PORTER, M.D., has been appointed Surgeon to the Simpson Hospital, Dublin, vice E. Hutton, M.D., deceased.

F. T. ROBERTS, M.B., B.Sc., has been appointed Lecturer on Comparative Anatomy and Zoology at the Liverpool Royal Infirmary School of Medicine.

R. W. SOPER, M.R.C.S.E., has been elected Resident House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth, vice Geo. Miles, M.R.C.S.E., resigned.

T. J. WEBSTER, M.R.C.S.E., has been appointed Assistant Medical Officer to the Bridge-street Workhouse, Manchester, vice A. Philipps, M.R.C.S.E., resigned.

H. WILSON, F.R.C.S.I., has been admitted a Member of the Royal Irish Academy.

W. L. WINTERBOTHAM, M.B., has been appointed Assistant-Surgeon to the Second Administrative Battalion of the Somersetshire Rifle Volunteers.

Births, Marriages, and Deaths.

BIRTHS.

On the 14th ult., at Ootacamund, Madras, the wife of Colvin Smith, M.D., of a son.
On the 5th inst., at Sibford-Ferris, Banbury, Oxfordshire, the wife of C. P. Knight, M.R.C.S.E., of a daughter.
On the 18th inst., at Bracknell Lodge, Hartley-row, Hants, the wife of T. A. Freeman, M.R.C.S.E., of a son.
On the 18th inst., at Stanley-terrace, Kensington-park-gardens, the wife of J. Waggett, M.D., of a son.
On the 18th inst., at Eastwood, near Nottingham, the wife of E. A. Brown, M.D., of a daughter.
On the 18th inst., at Castle-terrace, Edinburgh, the wife of J. Bell, M.D., of a daughter.
On the 22nd inst., at Gower House, Gower-street, Bedford-square, the wife of Dr. Archdeckne Duncan, of a son.
On the 24th inst., at Everton-road, Liverpool, the wife of Dr. A. F. Graham, of a daughter.

MARRIAGES.

On the 18th inst., at the Parish Church of Peterefield, Hants, Fred. John Gray, Surgeon, of Rugeley, to the second daughter of Wm. Adams, Esq., of the above place.
On the 18th inst., at St. Giles's, Cambridge, Albert Louis Peacock, M.R.C.S., of Ford Cottage, Churchinford, Devon, to Fanny, eldest daughter of S. Ridge, Esq.—No Cards.
On the 23rd inst., at Liverpool, P. W. Jones, Surgeon, of Shrewsbury, to Matilda, daughter of the late W. A. Smith, Esq.

DEATHS.

On the 24th ult., at Sierra Leone, G. E. Wright, M.D., Assistant-Surgeon H.M.'s Ship "Rattlesnake," aged 24.
On the 28th ult., R. Laycock, L.R.C.P.L., of Bramley, Leeds, Yorkshire.
On the 10th inst., at Chatham, J. B. Jardine, L.R.C.S.Ed., Staff Assistant-Surgeon Army, aged 28.
On the 13th inst., Jas. Wm. Geo. Travers, L.S.A.L., of Millpond-street, Bermondsey, aged 51.
On the 18th inst., at West-street, Glasgow, John Frame, M.D., late House-Surgeon to the Greenock Hospital and Infirmary.
On the 18th inst., John Smellie, L.R.C.S.Ed., of Ruddington, Nottinghamshire, aged 62.
On the 21st inst., at Tutbury, near Burton, George Henry Strutt, M.R.C.S., L.S.A., aged 32.

Medical Diary of the Week.

Monday, Jan. 29.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 9 A.M. and 1½ P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Austie (Lettsomian Lectures), "On Certain Painful Affections of the Fifth Nerve."

Tuesday, Jan. 30.

GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Heat."

Wednesday, Jan. 31.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.

Thursday, Feb. 1.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
LONDON SURGICAL HOME.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Heat."
CHEMICAL SOCIETY.—8 P.M. Dr. Gilbert, "On the Utilization of Town Sewage."
HARVEIAN SOCIETY OF LONDON.—8½ P.M. Mr. Victor de Méric, "On Syphilization."

Friday, Feb. 2.

WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Huxley, "On the Classification and Structure of the Mammalia."
ARCHÆOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—4 P.M.
ROYAL INSTITUTION.—8 P.M. Earl Stanhope, "On the Influence of Arabic Philosophy in Mediæval Europe."

Saturday, Feb. 3.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Westmacott, "On Art Education, and how to Observe in Fine Arts."

To Correspondents.

C. C.—In individual cases the amount of the drug which may be taken without the production of the usual effects on the mouth, submaxillary glands, &c., may be very great; whilst in others a very small dose will produce them.

Dr. Murchison requests us to state that he has been unable to respond to the very numerous applications made to him for vaccine lymph, as only one gentleman has sent him any for distribution.

Phi.—The fee could not be claimed under the circumstances stated.

VEGETABLE PARASITES.

To the Editor of THE LANCET.

SIR,—In the present number of the *Microscopical Journal* is an article by Mr. Jabez Hogg on "Vegetable Parasites," concluding with the propositions in the left hand column below, stated as the results of his own observation and experiment. In THE LANCET for 1859, and subsequently in my book on Parasitic Diseases, the contents of the right hand column appeared.

MR. HOGG. *Microscopical Journal*, Jan. 1866.	DR. TILBURY FOX. THE LANCET, vol. ii., p. 284, 1859.
1. There exists but one essential organism, a fungus whose spores find a soil common alike to the surface and the more secluded parts of the human or animal body.	1. There exists but one parasite, common alike to the several so-called distinct kinds of tinea.
2. That variations in skin diseases associated with parasitic growth are due to differences in the constitution of the persons affected; to the moisture, exudation, soil and temperature, under which the development of the fungus takes place. Consequently it is neither correct nor desirable to separate and classify them as parasitic diseases of the skin.	2. The variations are mostly in the external characters of the tinea, in the superadded rather than the essential conditions of the disease; for the parasitic growth varies but little, and that only in *degree*, not in *kind*.
3. The parasitic growths vary but little in any case, and that only in degree, not in kind, some soil appearing to be better suited than others for their development—that furnished by the eruptive or secretory surface being in every way the most congenial; while diversity of form in all cases arises from growth taking place upon a sickly plant, a saccharine solution, or animal tissue.	3. The superadded concomitant states (especially eruption and the like), by their variation, fully account for the observed differences in physical and minute appearances.
4. That fungi generally excite chemical decomposition in the soil on which they feed.	4. A certain soil is requisite for the growth of the tinea vegetations, and that furnished by non-specific eruptive crasis is the necessary one.

It is odd that Mr. Hogg should have shifted round from his former position, that the parasites were altogether *accidental* and *many*, to that of an identity almost, not only in view, but actual expression, with myself. Mr. Hogg does certainly quote my book, and now agrees with me that the disease of the hairs is the diagnostic sign of the growth of fungi; but he adds that this does not invalidate the view he formerly expressed, that "fungi are not necessarily pathognomonic of any special form of skin disease." He thus admits the existence of a pathognomonic lesion, and then immediately denies its existence. The apparently novel matter in his paper relates to the production of fermentation by achorion and other fungi. Dr. Lowe has made experiments of this kind, and I believe it is correct to say that Mr. Druce some time ago communicated to Mr. Hogg the results of some experiments exactly similar to those which Mr. Hogg now details.

As I see Mr. Hogg's paper advertised specially and separately on the front page of one of the journals, it only remains for me to seek that publicity for facts touching a subject upon which I have bestowed, and am still bestowing, a good deal of time and hard work, and this THE LANCET is always ready to accord in the cause of fair play.

I am, Sir, your obedient servant,

Sackville-street, Piccadilly, Jan. 12th, 1866. TILBURY FOX.

A Weekly Reader.—a. The Canadian College would be the most liberal and preferable for an English student to obtain either of the degrees mentioned.—b. Four years of study are required, with attendance on lectures for three sessions, together with a liberal education.

Onyx.—1. We do not.—2. Mr. Birkett's well-known treatise.

THE CASE OF MRS. KEY.

To the Editor of THE LANCET.

SIR,—Will you have the kindness to insert in the next number of THE LANCET the following list of subscriptions on behalf of Mrs. Key:—

Collected by Mrs. Alder—

	£	s.	d.		£	s.	d.
Mr. Gardiner	2	0	0	Mr. Pickett	1	0	0
Mrs. Wetherhead	1	0	0	Mr. Lyne	1	1	0
Mr., Mrs., and Miss Stroud	3	15	0	Rev. W. Watkins	1	0	0
Miss Malin	1	0	0	Mr. Copins	1	0	0
Three Friends	1	4	6	Mr. Groom	1	1	0
Mrs. Dockrell	1	0	0	Rev. W. Alder	1	0	0
Mr. Tattersall	3	3	0	Mr. Willoughby	1	1	0

Collected by Mrs. Edmonstone—

	£	s.	d.		£	s.	d.
Mrs. Kimber	1	1	0	Mrs. Herring	1	1	0
Miss Chamberlaine	1	1	0				
R. Edmonstone, Esq. ...	5	0	0	In small sums from 1s. up to 10s. 6d.	6	9	0
N. Clifton, Esq., F.R.C.S.	1	0	0				

I remain, Sir, your obliged and humble servant,

January 24th, 1866. WM. WALKER.

Mr. Buller, (Newton Abbot.)—1. Mr. Fletcher has been in the habit of retrovaccinating cows with the object of obtaining lymph direct from the cow for the vaccination of children.—2. We are informed by Dr. Murchison that the cows referred to by Mr. Chambers were not really vaccinated.

Derma.—Paris or Vienna.

Overburdened.—Combined and decided action on the part of the whole profession could alone sufficiently modify the evil.

PROTOXIDE OF NITROGEN IN CHOLERA.

To the Editor of THE LANCET.

SIR,—Considering from a chemical point of view the phenomena which are stated to accompany the period of refrigeration and muscular contraction in cholera, there appears to exist a possibility of combating this condition by the inhalation of protoxide of nitrogen or of pure oxygen. I confine myself strictly to the idea of combating the state of refrigeration and cramp, or period of *algidity.** During this period the pulmonary actions are always more or less suspended, and the air which is inspired leaves the lungs without having lost any of its oxygen; the chemical combustion which ought to take place between the oxygen inhaled and the carbon and hydrogen particles in the blood ceases. "L'air qui s'échappe des poumons dans le choléra bleu sort comme il y était entré, sans avoir rien perdu de son oxygène." (Doyère.) It is precisely these symptoms that I believe there is a possibility of assailing; but I do not offer any theory as to the pulmonary paralysis being the fundamental cause of cholera or not. Without discussing this question, the re-establishment of the normal pulmonary action may be considered sufficiently desirable of itself. It appears perfectly rational to consider the refrigeration and muscular contraction as the natural effect of the cessation of the internal calorification which results from the oxidizing process that goes on in ordinary healthy respiration.* The great difference between the oxidizing activity of protoxide of nitrogen, of pure oxygen, and that of common air is discernible by the most ordinary experiments. Either of them would be administered with a view of furnishing oxygen to the blood, not only in a greater volume, but in a probably more favourable condition for combination, since either gas would be a simple unmixed body as opposed to the mixture which constitutes the air. The effort would be to cause the enfeebled respiratory functions to act under the most favourable conditions for effecting the normal chemical actions.

Under the name of laughing gas, the stimulating effect on the system by protoxide of nitrogen is well known. This effect is probably due to its oxidising power. The question is, Would the same proportionate power, as compared with ordinary air, operate in the crisis that interests us? Experiment alone can decide. Protoxide of nitrogen being a combination of the two grand elements of the air, it would be preferable to experiment with it first, having recourse later to pure oxygen as a more powerful body. It would be well to administer either of the gases as warm as possible, this condition being most favourable to the chemical action desired.

One word of precaution. It has been observed that during the period of algidity the most powerful stimulants and medicaments may be given in unusual quantities with but little effect. The power of absorption appears to be suspended; but if reaction sets in, the absorbent functions also return, and the sufferer perhaps has to contend with the sudden action of medicines too powerful for the system. This danger ought to be specially considered were the inhalation of either of the above gases tried, especially that of pure oxygen, whose effects might be not only more powerful, but also more sudden than expected. It would be best to experiment in the presence of either no other agent or only with other agents administered with the greatest caution.

Yours respectfully,

Hôtel des Beaux Arts, Lyons, Dec. 1865. JAMES C. COOPER.

* "Le choléra bleu suspend les actions chimiques du poumon et de la peau, de sorte que, l'oxygène ne se combinant plus au carbone du sang, toute combinaison se trouve arrêtée, et il en résulte un froid plus ou moins intense, au milieu duquel succombent les malades."—*Gazette des Hôpitaux.*

C. B. B. writes to say that, after long reflection, he has come to the conclusion that the active poison in all contagious diseases is an insect, which is bred by a hot sun acting on decomposing animal or vegetable matter. He believes that this is also the nature of the poison in the cattle plague.

NOVA SCOTIAN DIPLOMAS.

To the Editor of THE LANCET.

SIR,—The following remark occurs in the "Medical Annotations" in last week's issue of THE LANCET:—"Any adventurer with a degree of M.D. from an 'eclectic college' or 'medical institution' in America or Nova Scotia, or any other self-constituted shop for the sale of diplomas, can give himself, as scores now do in London, all the outward semblance of a qualified practitioner."

However true this may be with regard to "America," by which, in common parlance, is meant that portion of the western continent more properly designated as the United States, I beg respectfully to demur to the charge as applicable in any degree to that still larger portion which hangs out the Union Jack to float in its wholesome breeze. As regards Nova Scotia in particular, although that province has abundance of schools and colleges, it is within my certain knowledge that not one of them makes a practice of conferring medical diplomas. The old University of King's College, Windsor (a branch of our Oxford), has bestowed the M.D., it is true, on some three local practitioners of eminence, but this only as an honorary distinction in cases where the recipients were already possessed of a British qualification. With these exceptions, I am not aware of a single individual who has a right to assume the title of M.D. of Nova Scotia. As for the *sale* of medical titles in that province, such a thing was never heard of, and my impression is that any "institution" which should venture to resort to such a proceeding would have a hard time of it at the hands of the Legislature. In fact, the rule as to qualification holds just the contrary way, the most frequent and valued professional honours in the province having been obtained by a regular course of study at the best medical schools in the United Kingdom.

Retaining a pleasant recollection of more than one profitable evening spent in hearing the discussions of the Medical Society of Nova Scotia, and of the genial "home" feeling engendered by the circumstance that many of those present were alumni of the same British schools to which I owe my own medical education, I venture to hope that these few words of vindication may be allowed a place in a journal which is as well known in Halifax as it is in London.

I am, Sir, your obedient servant,

London, Jan. 22nd, 1866. A TRAVELLED PHYSICIAN.

Medicus Rusticus.—1. This point is undetermined. Probably more will be necessary.—2. Several small incisions into the cutis may be made close to one another at three different places.—3. The lymph is first to be blown out upon a piece of glass, and then taken up on the point of a lancet.

Mr. G.....s.—The question was fully discussed some months back in this journal.

C. M.—The new method of microscopic illumination adopted by Messrs. Powell and Lealand is also used by Messrs. Smith, Beck, and Beck.

THE MANAGEMENT OF THE NEW SYDENHAM SOCIETY.

To the Editor of THE LANCET.

SIR,—Will you kindly grant me a little space to draw attention to the unhealthy condition into which the affairs of the New Sydenham Society are gradually drifting. This Society started some seven years ago under the most favourable auspices, and had its management been conducted with sufficient energy, it might doubtless be now receiving the support of at least five thousand members. What the number for 1865 may be, I have no opportunity of knowing; for although the annual meeting was held in August, no copy of the Report has yet been issued. This is one subject for strong complaint. Another incomprehensible fact is, that during the past year the members have only received for their subscription the third volume of Casper's Medical Jurisprudence and a copy of the Year-Book. Now, commercially speaking, neither of these works is worth half a guinea, and it is certain they can be purchased for less at various booksellers. I do not know whether any other volume is to be issued for 1865. But if one is to be given, my view of the unsatisfactory state of the Society is not diminished, because at the onset it was determined, as a fundamental rule, that the books of each year should be distributed during the year they were due. Surely by this time the Society should have got into such working order as to prevent any delay.

There may be many causes for this state of matters; but the chief, in my opinion, is the fact that the Secretary has more work upon his hands than he can reasonably be expected to accomplish. I have no unkind feeling whatever for this gentleman; but, on the contrary, the very highest respect for his talents and accomplishments. But with the greatest industry it does not seem possible for him to devote much time to the affairs of the Society. According to the Medical Directory, he is Surgeon to the Metropolitan Free Hospital; Surgeon to the London Hospital, and Lecturer on Ophthalmic Medicine and Surgery in the School; and Assistant-Surgeon to the Royal Ophthalmic Hospital. Moreover, I believe he has just been appointed Surgeon to the Hospital for Skin Diseases, and last year he obtained the Astley Cooper Prize for an essay on Injuries to the Head. Grant some hours in each day for private practice, and how many minutes remain, I would ask, for our Society?

Now, the remedies for the present unsatisfactory state of affairs, so far as the New Sydenham Society is concerned, seem to me to be very clear and simple.

1. The Secretary, who is very properly paid a liberal salary, ought not to hold office for more than five years. The post should be given to some active man, who, instead of being established, is rather commencing practice, and who must devote considerable time and energy and much attention to the affairs of the Society.

2. The Treasurer should only hold office for five years, and matters ought to be so arranged that his term of duty does not expire at the same time as the Secretary's.

3. The annual meetings ought to be held in London, so that the members may see the general management, and may really elect their officers, instead of allowing these gentlemen virtually to elect each other.

4. A report should be issued punctually every six months, detailing the progress of the Society, giving an abstract of the proceedings of the Council, and notifying the books in hand and the date of their contemplated distribution.

And 5. I would suggest that the minutes of the Council and other meetings ought to be full and clear. They must be entered in the minute-book directly after each meeting, and they should be open to the inspection of any member of the Society at any reasonable time.

Whether these changes will answer the purpose may be thought a question of experiment. But one thing seems certain—viz., that unless some great improvement takes place, the New Society will soon share the deserved fate of the Old Sydenham.

Your obedient servant,

January, 1866. A MEMBER OF THE N.S.S.

J. R. H.—They can be obtained by order of any surgical instrument-maker in London or the provinces.

Enquirer.—The ordinary dose for an adult is from five to fifteen grains.

THE GRIFFIN TESTIMONIAL FUND.

To the Editor of THE LANCET.

SIR,—The following subscription has been further received on behalf of the above Fund:—

Haynes Hardwicke, Esq., Hempnall	£0	5	0
Amount previously announced	132	14	2
Received at THE LANCET Office	9	0	0

Yours obediently,

ROBERT FOWLER, M.D.,
Treasurer and Hon. Sec.

145, Bishopsgate-street Without, Jan. 24th, 1866.

A. B. C.—The War Office authorities sanction the anomaly, which is most unjust to civil medical practitioners.

Public Vaccinator, in a communication, says:—

"I should be glad if any of your readers who have paid particular attention to the subject of vaccination would favour me with an explanation of the following fact, which has certainly staggered my faith in the powers of vaccinia ever since:—A father of a large family and two of the elder children were attacked with small-pox. The mother immediately brought her youngest child, about one year old, to be vaccinated, all the others having been done. A day or two afterwards this child developed variola in a most severe form, and died about the fifth day, and I had an opportunity of watching both diseases running side by side, as on the eighth day of the vaccination, the day of death, the vaccine vesicles were perfect. Evidently in this case the influences of the diseases on each other was nil."

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—It is well the Naval Medical Commission have asked some questions relative to the treatment of medical officers. Their position has well-nigh been intolerable. It is reported, on the Chancellor of the Exchequer being told that more money would be required for the medical services, that he replied, "Why don't you treat your doctors better, and then you would get plenty of them." I have no hesitation in saying that very many of our grievances are embodied in the words of the Chancellor of the Exchequer. The value of medical officers is the commercial one of demand and supply. The real question is, What must be offered in the shape of money to a medical man to give up the pleasure of being his own master, the comforts of domestic life, and the prospect of a competency, to induce him to practise his profession in the navy, to undergo many necessary and not unfrequently many unnecessary privations, long absence in a foreign climate, and perhaps to have to serve in an uncomfortable ship, from which there is no escape? I am sorry to be obliged to make the assertion, but nevertheless it is the truth, that the whole executive, from the Admiralty downwards, are our natural, or rather I should say our unnatural enemies; for it is very difficult to conceive but that they themselves would desire, when stricken by disease (far more deadly than the bullet or the cutlass), to have the services of the best medical officers the country can give them. How the Admiralty have carried out the provisions of the late Warrant may certainly be considered a very good proof of their feelings towards us; nor will the present dearth of assistant-surgeons be less a proof of the treatment they have experienced, and may expect if they enter the navy. Let me ask the executive themselves what would a ship-of-war be in action without a medical officer? Nor are his services of much less value during the time of peace. There are but few amongst us who cannot look back upon the time when the visit of a medical man was anxiously looked for, and his presence felt as a real comfort.

But to commence with the assistant-surgeons. I believe to this day that they have no certainty of cabin accommodation. It has been said that trifles make the sum of human happiness. The unpleasant treatment of medical officers may consist of trifles; but they are not the less keenly felt because to a certain extent they are undefinable. Suffice it to say, the medical officers are not treated as educated gentlemen have a right to expect, and they feel it accordingly.

As to the surgeon, it would almost appear that the Admiralty ignore the rank altogether. They do not even make a difference between the undress uniform (that which is usually worn) of a surgeon and of an assistant-surgeon.

Again, look at the position of the staff surgeon. What additional comfort does he obtain by long servitude? Less than none, because too often he is not in a position to go on half pay, and must bear whatever happens. He will have no redress from the Admiralty against the executive, however right he may be. He is still in the dark, dreary cockpit, with its foul air, its stink of bilge, and very often he has the extreme discomfort of a leaky cabin, which often prevents his natural rest, and spoils almost all he has. Although he ranks with a captain under three years' standing, or, better to express it, with a lieutenant-colonel, he has only half a servant; and as to going on shore (when the captain permits him—*vide* the late *Donegal* case), perhaps he may get a ship's boat, but very frequently may find his way there how he can, although when the commander goes on shore he has his gig manned for him. Much has been said about the class from which the surgeons are taken. I think the less said on this point the better; for with the exception of perhaps a few sons of the nobility who enter the service, the executives and the medical officers are on an equality as regards social position. What sense is there, then, in attempting to look down upon them, particularly as the medical officer is almost invariably a man of very superior attainments?

But to obtain our proper position we must begin at the fountain-head. The Director-General should be something more than Director-General merely in name. At present he may be a cypher at the caprice of the naval medical Lord, who has the power to, and frequently does overrule or reverse his recommendations. He should take his place at the Board of Admiralty, and be *de facto* the head and chief of the medical department of the navy. Of what possible use is the naval *medical* Lord? Besides, it seems so very inconsistent to pay two officers for what can be so much better and more efficiently done by one. Again, the naval medical Lord is not unfrequently only a captain, in relative rank inferior to the Director-General.

The Inspector-General should have the same pay and allowances as a Rear Admiral. Can anyone assert that his services are of less value? Take the duties of an Inspector-General of a large hospital, and look at the amount of good he does. There can be no doubt he deserves to be infinitely better paid than he is, and he should have full charge of the Naval Hospital. His position has too often been made a very unenviable one by the captain superintendent, as in the case of Captain Nias, late of Plymouth Hospital. True, they are not all like Captain Nias; but the very existence and utility of an hospital depends upon the medical officer, and there his position should be second to none.

The Deputy Inspector-General should also have more pay and allowances, and in the absence of the Inspector-General he should have charge of the hospital.

In short, from the highest to the lowest grade of medical officer, all should receive better pay and more consideration, and have, as a matter of right, every privilege of the executive of relative rank short of actual command. The Admiralty should look upon the medical officer, not only as a necessity for the service, but as really a man to be valued and esteemed; and let us have no more of such expressions as are said to emanate from them (and I believe truly): "Those d—d doctors, what do they want now?" I have endeavoured to show them what we want. I have read somewhere that in the time of Lord Anson the Admiralty sent an order to the fleet that the marine officers were to be treated as gentlemen. A repetition of such an order in favour of medical officers would be of immense assistance to their Lordships in obtaining candidates for the naval medical service.

I am sorry to say that there is a report that the Naval Medical Commission is about to recommend what will fall very far short of what is hoped and expected. Indeed, from what I have heard, many of the questions that have been asked by the Board are not calculated to draw from a man his real opinion; and I think it a pity so few of the real working bees of the service (the men under twenty years) have been examined. It is to be hoped they will pause before sending in any recommendations that will not have the effect of bringing forward a plentiful supply of good candidates. It is no credit to a great country like this that there should be such a dislike to enter the public services; nor, I am sure, does the country begrudge money. It is therefore only necessary for the Medical Commission to send in wise and judicious recommendations to restore the services to popularity. If they do not, Parliament must be appealed to; and it is sincerely to be hoped that candidates will not enter the service until they have sufficient guarantee for the future.

Your obedient servant,

January, 1866. SURGEON, R.N.

Dr. R. S. Peart, (North Shields.)—We are not aware of there being any place in London for the purpose in question; but we think the Medical Officer of Health for Liverpool might be able to afford our correspondent some information on the subject, since, if we mistake not, there is a hot disinfecting room or closet at the public baths in the metropolis of the western districts.

Z. W.—The books named are as good as any other that can be recommended for the purpose.

Q. Q.—Not to our knowledge. A reaction on the subject is certainly taking place.

TREATMENT OF ACUTE ECZEMA.

To the Editor of THE LANCET.

SIR,—In answer to your correspondent, "Constant Reader," I beg to submit the following as a remedy for acute eczema, having myself found it exceedingly useful, not only in allaying the irritation, but in a very short time curing the disease:—Oxide of zinc, two drachms; glycerine (Price's), half an ounce; rose water to four ounces. This lotion is to be kept constantly applied to the affected part, and if persevered in I have no doubt your correspondent will find it, as I have done, a most useful preparation.

I am, Sir, your obedient servant,

January 20th, 1866. J. B. B.

Constant Subscriber, (Hastings.)—1. The fee may be either one guinea or two. There is no "usual fee" in these cases.—2. He is not entitled to the use of the prefix "Dr." by courtesy or otherwise.

Alpha.—The old "Dublin Dissector."

Mr. J. H. Walker, (Rosedale Abbey.)—Vaccination might be performed with perfect safety.

Cymro.—1. Not dangerous.—2. Ought to be kept under shelter.—3. Yes.—4. From any surgeon in the habit of vaccinating children.

A LARGE INFANT.

To the Editor of THE LANCET.

SIR,—On the 18th instant, at eleven A.M., I delivered Mrs. W—— of her ninth child (first seven boys, then two girls). She is a fine, well-formed woman, of fair complexion. Her husband, a paperhanger, is a well-formed man, a trifle below the average height. The measurements of the child, who is I think a perfect model of beauty, are—Length, measured from head to heel, 21½ inches; circumference of chest, 15 inches; circumference of thick part of thigh, 8½ inches. Yours faithfully,

Markham-square, Chelsea, Jan. 20th, 1866. M. WARD, L.R.C.P. Ed.

Mr. James Bruce is thanked for his communication, the object of which is to prove that the rinderpest is a compound disease, or a combination of plague and leprosy.

A Young Botanist.—The snow-drop and the snow-flake are different plants altogether. One is the Galanthus nivalis; the other the Leucojum æstivum.

SPIRIT OF WALNUTS AS A GASTRIC SEDATIVE.

To the Editor of THE LANCET.

SIR,—Thanks to Dr. Cook for making more public the spirit of walnuts as a gastric sedative. It may be interesting to him, and perhaps useful to others, to know that in several cases where patients have found cod-liver oil has produced nausea and even vomiting with almost all known vehicles for that valuable medicine, I have recommended them to try it in good walnut-ketchup, and with decided success.

Yours faithfully,

Hertford, Jan. 20th, 1866. HERBERT B. HODGES, M.R.C.S.

EVERY communication, whether intended for publication or otherwise, must be authenticated by the name and address of the writer. Papers not accepted cannot be returned. Articles in newspapers, to which attention is sought to be directed, should be marked. Communications not noticed in the current number of THE LANCET will receive attention the following week.

COMMUNICATIONS, LETTERS, &c., have been received from — Prof. Syme; Dr. Hughes Bennett; Dr. Brown-Séquard; Dr. Stephen Ward; Dr. Wade; Mr. T. Holmes; Mr. Hodges, Hertford; Dr. Young, Yarm; Mr. Reynolds, Steeple Bumpstead; Dr. Hamlyn, West Stockwith; Dr. Parkes, Netley; Mr. Ellis; Mr. Wallah; Mr. Prosser; Dr. Young, Glasgow; Mr. Baxter; Mr. Sharp; Mr. Hodson, Hull; Dr. Holbrow, Stonehouse; Mr. Porter; Mr. Hartley; Mr. Griffin; Mr. Ashford; Dr. Skimming; Mr. Jubb, Halifax; Dr. Fowler; Mr. Broyer, Melbourne (with enclosure); Dr. Griffith, Hyères; Mr. Heaps, Otley; Mr. Braithwaite; Mr. Macnamara, Calcutta; Mr. Buller; Mr. Turner; Dr. Harper, Windsor; Dr. Britton, Driffield; Mr. Fleming; Dr. Fernie, Great Malvern; Dr. Browne, Derry; Mr. Webster; Dr. Saxton; Dr. Davies, Wrexham; Mr. Chamberlain; Dr. Bastian; Mr. Sloman, Farnham; Dr. Slyman; Mr. Wynter, Winslow; Mr. Locking; Mr. Drury; Dr. Clarke, Lynton; Dr. Mason; Mr. Kesteven; Mr. Robinson; Mr. Paull; Mr. Gaffney; Dr. Miles; Mr. Burnham; Mr. Stokoe; Mr. Gray, Rugeley; Mr. H. Jones; Mr. Armstrong; Dr. Roberts, Liverpool; Dr. Sheppard; Mr. Tucker, Aberystwyth; Mr. Rose; Dr. Goolden; Mr. Walker; J. S. H.; P. Q. V.; T. W.; A Travelled Physician; J. C.; Ex uno disce omnes; P.; T. H. M.; T. J.; F. L. G.; J. R. B.; L.R.C.P. Glasg.; T. R.; Vigilans; Non-Licensed; E. H. C.; Enquirer; Onyx; F. C.; M.D.; Overburdened; Medicus Rusticus; C. M; Public Vaccinator; A Weekly Reader; A. B. C.; A Young Botanist; &c. &c.

THE *Hampshire Advertiser*, the *Reading Mercury*, the *Western Times*, the *Scotsman*, and the *Keighley News* have been received.